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CITY COUNCIL MEETING  
June 18, 1993

1993-94 OPERATING BUDGET REVIEW

CC-21(b)

ELECTRIC UTILITY DEPARTMENT BUDGET

The City Council continued the budget discussion regarding the Electric Utility Department from the June 15, 1993 meeting. Assistant City Manager Glenn outlined the reductions, the elimination of two positions, and the implementation of a conservation program as required by law.

Speaking on the matter was Frank Alegre, 2000 Edgewood Drive, Lodi.

Further, Mr. Rice presented the City Council with a sample proposal from Resource Management International, Inc. for a management audit of the Electric Utility Department.

CITY ATTORNEY'S BUDGET

Assistant City Manager Glenn presented the budget for the City Attorney's office informing the City Council of the reduction of one-third of the Legal Secretary's salary (which can be found in the City Manager's budget), the addition of a Deputy City Attorney and the duties that this position will undertake.

Speaking on the matter was Frank Alegre, 2000 Edgewood Drive, Lodi.

Mayor Pennino reminded the public of the upcoming budget review meetings.

CITY OF LODI  
LODI, CALIFORNIA

1993-1994

BUDGET CONSIDERATION - MANAGEMENT AUDIT

June 17, 1993

To the Honorable Mayor and  
Members of the City Council  
Councilmembers:

File for  
6/18/93

A question was asked by Councilmember Mann during the most recent budget review session regarding retaining an outside consultant to perform a management audit of the Electric Utility operation. Councilmember Mann asked the question and I had no appropriate information at that time to indicate potential cost of such an audit, nor did I have a typical scope of services normally associated with such an audit.

The firm of Resource Management International, Inc. (RMI) performs management consulting services for utilities throughout this area, including many of the municipal governmental agencies we deal with at NCPA. A comprehensive management audit proposal was developed by RMI staff in Sacramento which should give you a reasonable guide as to the breadth and cost of such a study.

The RMI Management Audit proposal sets forth a two phase approach. The first phase would provide a diagnostic review

which assesses the overall electric utility operation and become incorporated into a report based on the findings. Discussions would take place at that completion regarding those areas within the utility operation (which would include accounting and finance) most likely to offer significant benefit to the City. This proposal reflects the typical (almost generic) approach of RMI and was developed in a relatively short time to supply you with some useful material for your consideration. Because such a management audit is an important undertaking that could have great significance, RMI recognizes that they would have to tailor the study to fit the Lodi Electric System more closely.

RMI developed a budgetary estimate for the management audit, which in the overall is in a range between \$200,000 and \$285,000. The Phase I activities represent \$100,000 to \$125,000 of this amount, and the Phase II activities represent \$100,000 to \$160,000 of the above amount.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "H. J. Rice".

Henry J. Rice

Electric Utility Director

Enclosures (2)

CC:  
Thomas A. Peterson, City Manager

**PROPOSAL TO  
THE CITY OF LODI  
ELECTRICAL UTILITY DEPARTMENT  
FOR A  
MANAGEMENT AUDIT**

**PREPARED BY**

**RMI**

**RESOURCE MANAGEMENT  
INTERNATIONAL, INC.**

**Resource Management International, Inc.  
Unpublished Work © June 1993**



RESOURCE MANAGEMENT  
INTERNATIONAL, INC.

June 17, 1993

Mr. Henry J. Rice  
Utility Director  
City of Lodi  
221 West Pine Street  
Call Box 3006  
Lodi, CA 95241-1910

Subject: Proposal to Perform a Management Audit of the Electrical Utility Department

Dear Mr. Rice:

Resource Management International, Inc. (RMI) is pleased to submit this proposal to the City of Lodi (City) to perform a management audit of the City's Electrical Utility Department. In order to provide an accurate and equitable assessment of the City's electrical utility operations and functions, we have assembled a team of experts with extensive electric utility experience and a proven track record for performing management audits. This, coupled with RMI's extensive experience in conducting comprehensive and focused management and operations reviews for electric, gas and water utilities, provides the City with the resources to develop plans for obtaining economies, efficiencies, and other improvements that have proven results.

Our approach is to divide the audit into two phases. Phase I will include a diagnostic review which assesses the overall operation of the electric utility functions. This review will identify those areas where potential improvement opportunities exist. Based on the results of the Phase I Diagnostic Review, Phase II will concentrate the audit resources in the functional areas offering the most benefits to the City. With this approach, the City will minimize the overall costs and maximize the overall benefits of the audit by focusing investigations on areas with potential for significant improvement.

We appreciate the opportunity to submit this proposal and look forward to discussing our submittal in detail with you. If you have any questions or require any additional information, please do not hesitate to call me directly at (916) 852-1300.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry E. Gawlik".

Larry E. Gawlik  
Senior Vice President

Enclosure

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THE CITY OF LODI  
ELECTRICAL UTILITY DEPARTMENT  
FOR A  
MANAGEMENT AUDIT**

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## SECTION 1

## EXECUTIVE SUMMARY

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Resource Management International, Inc. (RMI) is pleased to submit this proposal to the City of Lodi, Electrical Utility Department (City) to perform a management audit of the City's electric utility functions. To perform this management and operations audit, RMI has assembled a strong team with extensive utility and management audit experience. Many of RMI's team members have worked for utilities at the management level. Because we bring a broad perspective on the industry, our audit will present a fair and balanced appraisal of the operations of the City. As a result of the audit, we will develop plans for economies, efficiencies, and improvements that have proven results. RMI is a national management and engineering consulting firm which has extensive experience in conducting comprehensive and focused management and operations reviews for electric, gas, and water utilities.

The methodology, technical skills, and experience which RMI brings to this assignment will provide an audit that will furnish the framework for the City to achieve significant benefits. Section 2 describes RMI's preliminary work plan, schedule and budget. We propose to divide the management audit into two phases. Phase I will include a diagnostic review which assesses the overall operation of the electric utility functions. Based on the results of the Phase I diagnostic review, Phase II will concentrate the audit resource in the functional areas most likely to offer significant benefit to the City. The areas addressed in the Phase I diagnostic review will include:

- Executive Management
- Finance & Rates
- Resource Planning
- Operations
- Human Resources and Organizational Development
- Customer Service
- Support Services

The diagnostic review is used to identify those areas with potential for improvement and investigates hypotheses of potential improvement only to the extent necessary to determine the probability and magnitude of potential savings and benefits. This approach minimizes the overall costs and maximizes the overall benefits of the audit by avoiding investigating areas with limited potential for improvement.

Sections 3 and 4 include summaries of RMI relevant project experience and the experience of the RMI audit team. RMI has performed management audits for utilities throughout the United States and overseas. RMI brings broad-based experience to this project which provides the basis for the comparative assessments and insights necessary to prepare a complete and balanced audit. RMI team includes members with local expertise and others

with national recognition in performing management audits. Our team has evaluated the effectiveness of numerous utility programs and organizational units within utilities and have suggested recommendations which have resulted in streamlined management and more efficient operations. The phased approach will provide a thorough overview of the City's electric utility functions with focused analyses in areas where the potential benefits to the City are significant.



## **SECTION 2 WORK PLAN, SCHEDULE, AND BUDGET**

This section presents RMI's scope of work to perform a management audit for the City. It includes the following sections:

- ▶ Overview of the Management Audit Approach
- ▶ Task Descriptions
- Schedule and Budget

Each task description describes the process and the deliverables associated with that effort.

This scope is preliminary and we will finalize the work plan, particularly the activities in Tasks 1.1 through 1.7, based on the City's input.

### **MANAGEMENT AUDIT APPROACH**

RMI will perform a management audit of the City that will provide an overall assessment of the City's electrical utility functions. We propose to divide the study into two phases. Phase I will begin the management audit with a diagnostic review which assesses the overall electric utility operation. Based on the results of Phase I, Phase II will concentrate the audit resources in the functional areas most likely to offer significant benefit to the City.

#### **Phase I: Diagnostic Review**

The areas addressed in the Phase I diagnostic review will include:

- Executive Management
- ▶ Finance and Rates
- ▶ Resource Planning
- ▶ Operations
- ▶ Human Resources and Organizational Development
- ▶ Customer Service
- Support Services

Each of these areas will be analyzed on a broad, but thorough basis. The goal of the diagnostic review is to provide an overview of the status of all of the functional areas of an operation. The diagnostic review is used to identify those areas with potential for improvement. It investigates hypotheses of potential improvement **only** to the extent necessary to determine the probability and magnitude of potential savings and benefits. This approach minimizes the overall costs of the audit by avoiding investigating areas with

limited potential for improvement. Upon completion of the diagnostic review, each of the City's functional areas will be placed in one of the following categories:

- ▶ *Well-managed area* – No areas of improvement were identified during the diagnostic review. **Optimum rating.**
- ▶ *Low potential for savings or benefits* – Although some savings or benefits potential have been identified, it is the auditing team's professional opinion that the expected savings are low relative to the effort required to achieve the savings. **Minor Improvement Necessary rating.**
- ▶ *Lower potential savings or benefits than in other areas* – The potential for savings or benefits as compared to the potential for savings and benefits identified in other functional areas of the project does not warrant further investigation in the area. In these cases, it may be more beneficial to concentrate efforts on areas offering greater potential. **Moderate Improvement Necessary rating.**
- ▶ *More qualitative than quantitative savings and/or benefits* – The potential savings or benefits are difficult to quantify; they are of a more qualitative nature and are thus more reliant upon subjective assessments. **Significant Improvement Necessary rating.**
- ▶ *Potential quantitative savings, improved operations, better service, and other cost efficiencies* – As identified in Phase I, there are significant potential savings and/or operational enhancements to be realized from further in-depth investigations and analysis. **Major Improvement Necessary rating.**

At the completion of Phase I, the RMI audit team will prepare a report based on the findings. Each of the functional areas will be analyzed and as a result placed in one of the categories above. In addition, the final report will present the findings and conclusions as well as the recommendations for the Phase II work plans. We will then meet with the City's key staff to review the results of Phase I and discuss the Phase II efforts. By working closely with the City, the RMI team will identify those areas for more extensive study in Phase II of the audit efforts. The final deliverable of Phase I will be a detailed work plan for the focused analyses in Phase II.

#### Phase II: Focused Analysis

This phase provides for investigating in-depth the specific areas that will be of benefit to the City. The specific activities RMI will perform during the Focused Analysis are as follows:

- Focused Interviews and Analysis
- Task Development Resulting from Additional Data

- ▶ Phase II Report Preparation

## TASK DESCRIPTIONS

### Phase I - Task 1: Diagnostic Review

For each of the following areas the management audit will analyze the functional area based on the existing organizational responsibilities, performance measures, staffing levels, cost data, planning guidelines, procedures, administrative systems and other information as appropriate. Phase I will consist of interviews with key City staff, visits to the facilities, and the gathering of a variety of documents which cover the City's policies, procedures, operations, management practices, and statistical data. The RMI audit team will perform up-front project planning and data gathering to familiarize ourselves with the City and its overall environment. This preparation will save both the City and RMI staff time in the interview process. The goal of this effort is to address the entire City's electric utility functions in the diagnostic review, and these categories will also include more specific evaluation such as safety training and inventory management under operations.

- ▶ Executive Management
- ▶ Finance and Rates
- ▶ Resource Planning
- ▶ Operations
- Human Resources and Organizational Development
- ▶ Customer Service
- Support Services

For each of the areas above, the diagnostic review will begin from the perspective of the objectives of that functional area ranging from communication of goals and objectives in the executive management category, to dissemination of key financial data to appropriate personnel in the finance category, to safety in the operations category. Specific issues critical to the City will be identified. Each functional area will be analyzed, compared, and contrasted with appropriate criteria such as:

- ▶ Generally accepted management practices
- ▶ Clarity and completeness of record keeping and reports
- ▶ Communication of appropriate information to the staff responsible for decisions
- ▶ Statistical comparisons to typical, similar utilities
- ▶ Effectiveness of resource utilization
- ▶ Cost management
- ▶ Management controls, administrative systems, and analytical tools
- ▶ Staffing levels and skills
- ▶ Planning, budgeting, and procurement procedures
- ▶ Policy determination and decision-making procedures

To manage the process, the RMI audit team will use a system of working papers to enable tracing a statement of fact in a finding, conclusion, or recommendation to the original source

document such as an interview, document, calculation, or analysis. The working-papers will identify the:

- Source of the information presented
- Nature and extent of the work done and conclusion reached
- Appropriate cross references to an indexed copy of the report, bulk file items, and working papers

The following Tasks 1.1 through 1.7 describe the major activities associated with a management audit. The RMI team will perform those activities appropriate for a diagnostic review in Phase I. Additional activities determined to be appropriate based on the results of Phase I will be performed in Task 3, Focused Analyses.

#### **Task 1.1 - Executive Management**

##### Objectives of the Review

Develop a balanced appraisal of the City's overall organization structure, management processes, management communications and controls, and administrative procedures.

Analyze the City's strategic and corporate planning process, the relationship of the City's electric utility plans, and the effectiveness of these plans in communicating the City's electric utility objectives, goals, and strategies. The capital and expense budgeting processes will be reviewed to assess if these processes are appropriately integrated into the City's overall planning processes.

Assess overall management capabilities relative to the City's needs, and culture/philosophy regarding principals of cost containment and manpower planning.

In summary, RMI will assess the effectiveness of the City's Executive Management in establishing reasonable goals for the City's operations, and in achieving these goals.

##### Assessment Criteria

The following criteria will be used in assessing the effectiveness of the City's Executive Management:

- Generally accepted management practices;
- Clarity and completeness of documentation;
- Clear and concise electric utility procedures, policies, and goals;
- Comparisons of the City's practices to typical utility industry practices and comparisons of selected financial and operational statistical indicators to other companies' ratios or to industry ratios, where appropriate; and

- ▶ Effectiveness of resource utilization.

#### Major Activities

The following is a list of the major activities which RMI will undertake to complete a preliminary review of the City's Executive Management function:

- ▶ Review the City's planning and policy setting processes;
- ▶ Review the process the City uses to develop goals and objectives, and their incorporation in the City's strategic plans;
- ▶ Determine if the City's goals and objectives are:
  - ▶ Documented,
  - ▶ Measurable,
  - ▶ Monitored, and
  - ▶ Reflected in the resource allocation and operating plans;
- ▶ Review management responsibilities and reporting relationships;
- ▶ Identify the levels of managerial decision making and assess the coherence of authority and responsibility;
- ▶ Identify the performance objectives set at the different management levels of the City and evaluate their appropriateness to achieve the City's goals and objectives;
- ▶ Evaluate the organization, the City's procedures and the decision-making process to ensure the presence of a sufficient level of management accountability;
- ▶ Evaluate the effectiveness of internal controls for commitment and expenditure of the City's resources; and
- ▶ Review administrative procedures to determine whether they adequately support the communication of executive management objectives and goals.

#### **Task 1.2 - Finance and Rates**

##### Objectives of the Review

This review evaluates the financial and rate making functions of the City and the ability of the City to assess its efficiency and effectiveness in performing these functions. It includes the review of:

- Financial reporting systems;
- ▶ Budget preparation, review, and analysis;

- The customer billing process;
- The City's current rate structure; and
- The City's business climate resulting from the City's rate structure.

#### Assessment Criteria

The following criteria will be used to assess the level of effectiveness of the City's Financial and Rate Making functions.

##### *Financial Reporting Systems*

- ▶ The financial reporting process should represent an accurate and timely feedback mechanism and provides relevant information for management decision making and external requirements;
- Financial report distribution is consistent with operating responsibilities;
- ▶ Financial reports are complete, well defined and understandable; and
- Users of the financial systems are satisfied with the level of detail, timing and service received.

##### *Budgeting and Variance Reporting*

- ▶ The budget process provides sufficient information to managers; and
- ▶ The variance analysis process is conducted systematically to serve as a useful tool in the evaluation of actual performance against budgets and forecasted financial results.

##### *Customer Billing*

- ▶ The customer billing process is sufficiently automated and provides for a timely, accurate, efficient and consistent method of billing customers on a periodic basis;
- The customer billing system produces a clear, concise, and easily understood customer bill;
- ▶ The customer billing system provides an efficient, accurate, timely method of updating customer account records;
- Performance criteria are being used to evaluate the customer billing activities; and

- The customer billing system is flexible and allows modifications and updates with a minimum of disruption.

#### *Rates*

- Rates allocate electric utility expenses fairly among customer groups;
- Rates promote the growth and expansion plans of the City;
- Rates are stable and are not subject to fluctuation; and
- ▶ Rates are attractive when compared to the City's contemporary utilities.

#### Major Activities

- ▶ Evaluate the organization structure for finance, customer billing, accounting and collection, and rates activities;
- ▶ Assess appropriateness of spans of control in providing effective control over financial operations;
- ▶ Interview management personnel and selected staff concerning span of control problems;
- ▶ Develop and assess the profile of current staff resources devoted to finance, customer billing, accounting and collection, and rates functions;
- ▶ Review and evaluate policies, procedures, and standards governing the finance, customer billing, accounting and collection, and rate functions;
- ▶ Assess financial reporting processes to (1) determine informational flows, data input and output, (2) assess the ease of access, timeliness of reporting, degree of automation, and flexibility of the financial reporting process, (3) flow chart processes, as applicable;
- ▶ Interview systems development personnel and key users concerning the vintage, features, and degree of satisfaction with the financial systems;
- ▶ Evaluate budget process for effectiveness and efficiency by (1) comparing budget to actual financial results for the past five years, (2) determining adequacy of budget detail, timeliness of reporting, and degree of use by unit managers of variance reports, and (3) interviewing budget preparers and users of budget data concerning satisfaction with the budget process, forms, level of detail, ease of use, and usefulness;
- ▶ Evaluate quality and quantity of variance analysis conducted on budget variances by (1) evaluating variance reporting standards, policies, and procedures, (2) assessing

reasonableness of variance explanations, and (3) determining degree of familiarity with variance procedures and compliance;

- ▶ Evaluate the efficiency of the customer billing process by (1) reviewing the flow of information and data that comprises the customer billing process, (2) assessing the reasonableness of the customer billing flow of information and the timing of the customer billing functions, (3) comparing and contrasting the customer billing process with other utilities, and (4) interviewing selected personnel throughout the customer billing process to determine areas of concern;
- ▶ Evaluate the effectiveness of the automated customer billing system by (1) determining the degree of automation of the customer billing system, (2) reviewing high level system documentation and user documentation, (3) determining the degree of flexibility in the customer billing system, and the ability of systems support personnel to make changes to the system, (4) interviewing key users to determine degree of satisfaction, (5) assess the reasonableness of the cost of operating the customer billing system, and (6) comparing and contrasting the customer billing system to other utilities;
- ▶ Review the methodology used by the City to allocate expenses to the various customer classes, the basis and timing for rate increases, and the public review process undertaken when rate increases are announced;
- ▶ Review the documentation supporting the City's rate increases over the past five years, interviewing key personnel involved in the rate making recommendations made by the City staff, and interviewing the decision makers to determine what key factors went into the rate making decisions;
- ▶ Evaluate the City's financial plans to determine if rate stabilization funds or accounts have been established, and if established, how the funds/accounts are used; and
- ▶ Compare the City's rates and rate structure to those of similar utilities.

### **Task 1.3 - Resource Planning**

#### Objectives of the Review

This review evaluates the load and resource plans of the City and the City's ability to control or otherwise change its resource direction.

- ▶ Resources are available to meet the City's current load requirements and sufficient resources can be reasonably added in a timely fashion to meet future load growth requirements;
- ▶ Demand-side management has an adequate role in meeting the City's current and projected load requirements;



- ▶ Power supply contracts are sufficiently flexible to allow the City to make beneficial generating and transmission resource decisions; and
- ▶ Available resources/contracts are being efficiently used to optimize the benefits to the City and to minimize the cost of power to the City customers.

#### Assessment Criteria

The following criteria will be used in assessing the ability of the City to manage its power costs:

- ▶ Meeting of the Western System Coordinating System (WSCC) reserve requirement standards and equivalent standards imposed on the City through power purchase and interconnection agreements with other utilities;
- ▶ Accuracy of the City's past planning projections when compared to actual load growth;
- ▶ Usefulness of the contributions made by the City into the joint filings to the Northern California Power Agency (NCPA) relative to the California Energy Commission (CEC) biennial report process; and
- ▶ Reasonableness of the cost of incremental capacity, energy, and power to meet the City's requirements.

#### Major Activities

- ▶ Review of the City's load and resource plans over the past five years, including submittals to NCPA regarding joint resources/contracts;
- ▶ Review of the City's demand side management program compared to similar utilities;
- ▶ Review of the City's power supply contracts and interconnection agreements;
- ▶ Interview the City's key power contracts staff who are in charge of planning, negotiating, and managing the City's power supply contracts and interconnection agreements; and
- ▶ Compare the flexibility and risks associated with the City's resource plan to that of similar utilities.

#### **Task 1.4 - Operations**

Investigate the effectiveness of the City's meter/relay systems, dispatch, and transmission and distribution planning, operations, and maintenance activities. This investigation will assess the degree to which this function is performed reliably, safely, and efficiently.

### Evaluative Criteria

As a functional area, operations lends itself to quantitative analyses. The early part of the audit will focus on results, trends, and ratios, including:

- Outage incidents, durations, and causes;
- O&M cost;
- Capital cost;
- Relevant customer complaints;
- Elapsed time to provide new service requiring line extensions; and
- T&D energy losses.

The resultant trends will be used to focus audit attention on those functions and processes that are either producing substandard results or show negative trends. These functions and processes will be evaluated by such factors as:

- Organization structure, spans of control, crew sizes, and accountabilities;
- Staffing levels and deployment;
- Performance measurements and management information;
- Work management systems;
- Maintenance programs;
- Use of contractors and other full-time employees;
- Facilities and equipment;
- Materials;
- Overtime; and
- Contractor management.

### Major Activities

- Identify specific functions or processes that seem to produce sub-par results or have declining trends;
- Investigate the causes of possible poor performance:
  - Interviews,
  - Additional document requests,
  - Review departmental planning and budgeting processes,
  - Flow chart processes and systems, and
  - Site inspections of facilities, equipment, materials, and methods;
- Investigate recent trends in the City's system performance to determine potential root causes of service deteriorations, if any:
  - Identify and graphically present trends,
  - Determine steps planned or taken by the City to improve trends, and
  - Where possible, quantify cost of improvements;

- ▶ Review the City's maintenance and repair record-keeping process for timeliness and accuracy.
- ▶ Evaluate the maintenance work planning process for effective use of resources:
  - ▶ Inventory analysis assessment and use,
  - Mix of planned and unplanned maintenance,
  - Use of job estimates to schedule and monitor crew activities,
  - Use extent of work planning to minimize travel, and
  - ▶ Sizing of crews versus specific task requirements (e.g., are crews configured according to job requirements?);
- Evaluate the City's approaches to the engineering and construction of facilities:
  - Are materials standards routinely used?
  - Is engineering performed internally or are vendor firms also utilized? When and why?
  - ▶ Review and evaluate the contractor selection process,
  - Review a sampling of contracts, their terms and conditions, and history of change orders, and
  - ▶ What are present long-term construction plans.
- Evaluate incidents of accidents and overall safety program;
- ▶ Review safety program, procedures, and training processes;
- ▶ Identify and evaluate cost-reduction programs.

#### **Task 1.5 - Human Resources and Organizational Development**

##### Objectives of Review

- ▶ Determine if current employee wage/salary and benefit rates are appropriate, in consideration of and rates paid by comparable utilities. This analysis must address:
  - Wage rates for each employee level,
  - The use for pay-for-performance mechanisms,
  - Key aspects of wage/salary administration program,
  - The plans that make up the overall benefits program, and
  - ▶ Existing strategies impacting wage/salary and benefits programs.

##### Assessment Criteria

- ▶ Policies and procedures established for the administration of wage/salary benefits programs;

- Evaluate compensation, at all levels, including wages, salaries, profit sharing, specific incentives, benefits, perquisites, and other compensation mechanisms and compare to similar utilities.
- Review appropriateness of internal distribution of wages and salaries as indicated by measures such as Compratio analysis;
- Review benefit plan documentation and communication;
- Assess whether the City regularly monitors the costs of its wage/salary and benefits programs, and considers alternatives as appropriate;
- Appropriate manpower planning mechanisms are employed;
- Appropriate budgeting and position control mechanisms are used;
- Recruiting and hiring programs are adequate to meet the City's needs;
- Training and development programs and activities effectively support the City's staffing needs;
- Appropriate systems are in place for the definition, scheduling, assignment, and tracking of work;
- Contractor versus in-house employee use is adequately determined;
- Productivity measurement factors are appropriate; and
- Performance appraisal mechanisms are effective and appropriate.

#### Major Activities

- Review policies, procedures, administration practices, and established objectives and strategies for all City wage/salary and benefits programs;
- Evaluate the ways in which the City communicates with employees regarding wage/salary and benefits programs;
- Evaluate the internal equity of the City's wage/salary and benefits programs;
- Evaluate the ways in which the City analyzes and responds to its wage/salary and benefits program costs;
- Define and evaluate the processes used for determining staffing levels;

- ▶ Evaluate the use of contractors, part-time and temporary workers, and the contractor versus in-house, decision-making process; and
- ▶ Identify how manpower planning integrates with the budgeting process.

#### **Task 1.6 - Customer Service**

##### Objectives of the Review

The overall objectives of the City's Customer Service audit are to determine efficiency and effectiveness of Customer Service functions in meeting customer needs, and to ensure adequate performance measures are in place.

##### Assessment Criteria

- ▶ Line and staff duties, operating responsibilities, and authority should be clearly defined and supported in documented and logical operating policies and procedures and management controls;
- ▶ Service facilities, office personnel, and field force allocations should be based on definitive service-level objectives and supported by measured and timely reported work performance standards and comparative industry statistics, including:
  - ▶ Service volume trends,
  - ▶ Route logic and work load uniformity,
  - ▶ Unresolved complaint backlog,
  - ▶ Billing accuracy performance,
  - ▶ Bad debt ratio, and
  - ▶ Cost and benefit analyses of programs and activities;
- ▶ Appropriate resources must be supplied to promote research, development, and implementation of advanced technologies and management techniques to achieve productivity, accuracy, service, and cost performance improvements.

##### Major Activities

###### *Account Servicing*

- Examine policies and procedures used by various functional departments in light of their customer relations implications. Areas to be reviewed include:
  - ▶ Is the City accessible in terms of business office locations and telephone operating hours?
- To what extent are customer expectations and the City's ability to meet these expectations measured?

- ▶ Are customer service representatives hired, trained, evaluated, and rewarded based on criteria that ensure maximum customer satisfaction?
- ▶ Are customer service representatives provided with the tools required to respond to the majority of customer contacts?
- ▶ What data is available to identify the nature of customer contacts, and how is it being used?
- ▶ Assess the means used to inform customers of the correct procedures to follow in conducting routine business (e.g., establish service, make credit arrangements, report meter reading);
- ▶ Evaluate the effectiveness and efficiency of operations in responding to individual customer requirements, and identifying specific areas that cause dissatisfaction and/or unnecessary contacts;
- ▶ Identify policies and procedures which are serving as "barriers" to improving customer satisfaction and service;
- ▶ Review the methods used to develop service quality goals and objectives, the management level at which these goals and objectives are developed, reviewed, and approved, and the effectiveness of these goals and objectives in the current environment; and
- ▶ Evaluate whether the City has developed approaches for measuring customer perceptions related to the quality of services (including timeliness).

#### *Meter Reading*

- ▶ Determining if the number of "no reads" and misreads are excessive. What are the trends - increasing or decreasing?
- ▶ Determine if the number of "no access to meter" is excessive and identify what steps are being taken to access meters;
- ▶ Define disconnect-reconnect policies and actual practices and examine consistency in application, analyze adherence to regulatory provisions, and determine cost-effectiveness of policies;
- ▶ Examine new service request policies for regulatory compliance and consistency;
- ▶ Determine if meter reading techniques result in gathering useful energy usage data;
- ▶ Examine testing equipment, procedures, and schedules for adequacy in ensuring accurate meters;

- Assess "theft of service" policies and provisions;
- Evaluate methods and procedures for planning, scheduling, and reporting meter readings;
- Assess management processes for tracking and reporting productivity, effectiveness, and error rates;
- ▶ Determine whether the City is using automatic meter reading systems, and if it is optimizing this use, including timing, accuracy, and efficiency; and
- Determine whether the City has placed appropriate emphasis on pursuing new technologies to reduce meter reading expense, improve cash flow, and provide better management control.

#### *Customer Accounting and Billing*

- Analyze policies and practices, particularly the reasons for and times when collections are attempted;
- ▶ Analyze size of collection backlogs to determine if excessive:
  - ▶ What are dollar amounts by length of time not collected (e.g., 3, 6, and 12 months not collected)?
- ▶ Analyze staffing adequacy and use of after-hours collection efforts;
- Assess the accuracy of accounting output:
  - Are account investigations (e.g., high bill investigations) completed? What are the results?
  - Are the number of incorrect names and addresses excessive?
- Assess the efficiency of billing activities:
  - ▶ Are bills produced on a timely basis?
  - Are billing errors kept to a minimum?
  - Is the level of bill estimation appropriate?
- ▶ Evaluate whether the customer information system has provided appropriate automation for insuring efficient, timely, and accurate information for determining and billing customer charges;

- Evaluate whether bill estimating techniques make the best use of appropriate technologies;
- Assess whether practices related to billing comply with applicable California requirements;
- ▶ Examine credit extension and deferred payment provisions; and
- ▶ Analyze arrears as a percentage of revenues. Analyze amounts of arrears by factors such as type of customer and length of time arrears.
  - ▶ Are practices regarding arrears consistent? Could amounts of arrears be reduced resulting in improved financial performance while observing regulations?

*Public Relations and Community Affairs*

- Review whether the City has sufficient public relations and processes in place to insure that it is effectively communicating its initiatives and intentions to its customers and communities.

*Complaints and Inquiries*

- Document practices used to respond to in-house inquiries and complaints;
- ▶ Evaluate whether management reporting related to number and resolution of complaints is appropriate;
- ▶ Compare complaint rates for similar utilities;
- ▶ Examine policies of telephone contact, correspondence, and walk-in service:
  - ▶ Are these consistent, and
  - How do they compare with those of similar utilities and service intensive businesses?
- Analyze complaint types and rates to determine trends;
- ▶ Review performance indicators on contact functions to determine if efforts could be improved:
  - ▶ What is the City's performance in the following areas:
    - ▶ Percent "no clerk available,"
    - ▶ Numbers of call per clerk,
    - ▶ Correspondence backlog numbers and time, and
    - Waiting times for walk-in customers.



### **Task 1.7 - Support Services**

#### Objectives of the Review

Support Services includes those activities which, while having significant costs associated with them, do not generate any revenues.

The areas to be covered in Support Services include the comparability of wage and benefit rates, work force management programs, materials management procedures and controls, purchasing procedures, vendor and contractor performance, and transportation practices.

#### **Phase I - Task 2: Diagnostic Review Report Preparation**

As the conclusion of the diagnostic review, the RMI audit team will provide a report at the completion of Phase II. It will include the following information for each task area:

- Introduction and General Statement
  - ▶ Assessment Criteria – This section will be the list of criteria provided in the detailed work plans.
  - ▶ Background – This section will provide a description of the functions reviewed, pertinent statistics, organization charts, including objectives, scope, and approach to the audit.
- Findings and Conclusions – This section will provide statements regarding areas of operation that are found to be in need of improvement or are of superior management and operating efficiency.
- Recommendations for Immediate Changes – RMI prides itself on developing workable recommendations that induce implementation, involving potential cost savings. The following supporting information will be provided for each recommendation:
  - Operating costs incurred before implementation of the recommendation
  - Operating costs incurred after implementation of the recommendation
  - ▶ Time frame for implementing the recommendation
  - ▶ Costs of implementing the recommendation and any annual maintenance costs
  - Savings after consideration of implementation and maintenance costs
- Prioritized schedule of all recommendations - RMI will prioritize all recommendations, both recommendations for immediate changes and recommendations for additional analysis.
- ▶ Overall Evaluation of each task or function reviewed using the following categories:
  - Optimal
  - ▶ Minor Improvement Necessary
  - ▶ Moderate Improvement Necessary

- Significant Improvement Necessary
- Major Improvement Necessary

### Phase II - Task 3: Focused Analyses

During this phase, the RMI team will perform in-depth analyses of specific areas or issues identified in Phase I. The work plan associated with this phase will lead to recommendations for providing better service, improving operations, or increasing cost efficiencies. The scope of Phase II depends on issues and conclusions of Phase I, Diagnostic Review, of the audit. This phase will follow similar procedures to Phase I. However, the level of detail will be significantly greater than the Phase I efforts. The goals and objectives of these analyses will be very specific and based on realizing the potential benefits identified in Phase I. This phase will also begin with a series of detailed interviews, information requests and responses reviews, analysis, and field observations for each targeted and approved issue or area. Phase II will also conclude with a report similar to the report described in Task 2 including findings, conclusions, and recommendations, with projected costs and benefits.

RMI's audit will be much more than merely a descriptive narrative of the City's activities in the relevant areas. RMI will provide insightful analysis and render critical assessments of the City's operations and policies, as well as offer suggestions and guidance for future audits.

The two-phase approach allows achievement of these goals through the conduct of a broad yet concise management audit, incorporating a general diagnostic evaluation. The broad audit will be followed (as determined necessary and beneficial) by a focused analysis of specific task areas. The diagnostic review permits broad review, with the possibility of additional detailed study through the focused analysis. This approach allows for in-depth focus on specific areas targeted during the diagnostic phase. This approach allows analytical time to be spent where there is the most opportunity for efficiency improvement and ratepayer benefit.

### SCHEDULE & BUDGET

RMI proposes to perform this management audit on a time and materials basis. This section includes a preliminary scope of work based on our current understanding of the City's requirements for the management audit. Task 1 presents both an overall approach to the audit as well as specific activities associated with various functional areas and objectives.

We have developed the budgetary estimate based on the preliminary scope of work presented in Tasks 1 and 2. The estimated budgetary range for Phase I labor is as follows:

Phase I: Diagnostic Review	\$0,000 to \$125,000
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The work plan for Phase II will depend on the results of Phase I and will be developed as the final deliverable associated with the Phase I efforts. Our estimated range for Phase II is:

Phase II: Focus Analyses	\$ 100,000 to \$160,000
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These budgets are labor estimates only; expenses will be additional. They also assume that the City will provide office space and facilities including phone, copier, facsimile machines, space for the on-site aspects of the audit. We anticipate that fifty to sixty percent of the audit time will be spent at the City's facilities.

The schedule for completion Phase I activities will be two to three months after finalizing the scope with the City and depends on the availability of the City's personnel. RMI will provide a schedule for the Phase II activities at the completion of Phase I and the definition of the Phase II work plan.

## SECTION 3

## QUALIFICATIONS

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Presented below are selected examples of our prior experience in performing similar management audits of utilities and companies.

### ***Wallingford Public Utilities Department, Wallingford, Connecticut***

RMI conducted a comprehensive management audit of Wallingford, Connecticut (Town) Public Utilities Department (Department). RMI staff assessed financial information, system planning and operations procedures, inter-division coordination, staffing, purchasing procedures, and the relationship of the Department to the Public Utilities Commission, other Town departments, and the Mayor's Office and Town Council. Procedures included procurement and review of Department reports and financial data, comprehensive interviews with all management staff and representative union personnel, and comparisons with utility industry operating norms and procedures.

### ***Turlock Irrigation District, Turlock, California***

An RMI team, working with an employee task force and a management steering committee, helped the client's line and engineering departments develop and implement an organizational effectiveness program. RMI's role was to facilitate group meetings, provide expert support when needed, and to coach staff members and managers regarding communications, work assignments, and discipline. The program addressed issues and problems, such as work flow and job communications, line crew size, work order processing software, and transportation/work force equipment.

### ***Pennsylvania Public Utility Commission, Harrisburg, Pennsylvania***

RMI is currently working on a stratified management audit of Pennsylvania Power & Light for the Pennsylvania Public Utilities Commission. The approach called for a review of all functional areas of operation, identification of those with potential for improvement and investigation of hypotheses of potential improvement to the extent necessary to determine the probability and magnitude of the potential savings and benefits. The purpose of this particular method was to determine areas where there existed potential for high returns from further investigation.

### ***Ohio Public Utilities Commission, Columbus, Ohio***

RMI performed a management audit of the Ohio Gas Company. The general functional areas addressed in the management/performance audit were management and organization, corporate planning, gas supply and procurement, market services and rates, operations, and regulatory and legislative activities. Specific areas of interest that were addressed included

the following: management succession plan and the delegation of gas supply planning authority; information transfer procedures; extension plans within its service territory; development and use of an accounting process to track monthly imbalances; impact of changing gas prices on subsequent make-ups of imbalances for system supply and agency gas; and efforts to monitor regulatory activities. The assignment also focused on Ohio Gas Company's supply and procurement functions and assessed whether the functions were efficient and effective and whether all purchasing policies and practices resulted in a reliable and economical supply of gas to its customers.

***City of Healdsburg, Healdsburg, California***

RMI was retained by the City of Healdsburg, California (Healdsburg) to develop a strategic plan for its electric utility. The City had been experiencing certain operational difficulties with its share of a jointly owned geothermal power plant and was faced with changed resource availabilities. The strategic plan examined available resource and demand-side management options, with particular emphasis on near-term decisions the City would be required to make. RMI prepared draft and final versions of the strategic plan and presented a workshop for the City Council and interested citizens to comment upon the draft strategic plan before its finalization.

***City of Dover, Dover, Delaware***

Working closely with the management and staff of the Electric Department of the City of Dover, Delaware, RMI identified opportunities for the utility to improve its overall organization, planning, and management practices. Following the analysis of information collected from the utility, the RMI project team conducted on-site facility inspections and discussions with the utility's staff and management. Using the information gathered our consultants presented management with a series of written observations and recommendations, including detailed implementation steps for improving the utility's organizational structure, facilities planning practices, operation and maintenance of Dover's generators, customer services and warehousing system, engineering practices, 69-kV transmission system and distribution systems, as well as the financial planning and budgeting practices.

***Public Utilities Commission, Agana, Guam***

RMI has been working for the Public Utility Commission of Guam since 1988 serving as its technical staff. In its role as staff to the Commission, RMI recently recommended that the Commission conduct a stratified audit of the Guam Power Authority (GPA). RMI has served as staff providing initial input on the functional areas with the greatest potential for improvement. Areas identified for the greatest return included executive management, power production, T&D operations, support services, and customer service. RMI's role has also included all of the responsibilities associated with review of work plans and draft

reports, participation in roundtable discussions, and review of the final report. Upon completion of the final report, RMI in its role as Commission staff, will review GPA's implementation plan and monitor implementation progress.

***Maine Public Utilities Commission, Augusta, Maine***

RMI was retained to conduct a management audit of Central Maine Power Company (CMP). The audit focused on management practices, structure and administration, and on customer service operations. RMI examined a variety of aspects of CMP's customer service operations, including marketing to customers with special needs, staffing and facilities, credit and collections, complaint analysis, service quality programs, customer service standards, winter disconnect programs, and customer outreach and education. Additionally, RMI conducted an in-depth study of CMP's management efficiency and cost control.

***New York State Department of Public Service, Albany, New York***

RMI performed an audit of the planning, design, construction, operation and maintenance of the transmission and distribution system of Niagara Mohawk Power Corporation. The objective of the assignment focused on reliability and power quality of electric service with regard to identifying methods and standards for measuring it and factors which influence it, assessed levels based on utility indices and customer perceptions, and identified improvement or corrective action programs. A final report documented the findings and included recommendations and options addressing outage reporting system, planning, design, construction, operation and maintenance.

***City of Pasadena, Pasadena, California***

RMI was retained by the Pasadena Department of Water and Power (Pasadena) to analyze the opportunity costs of serving new electric and water customers. Pasadena, which served 36,600 water and 53,000 electric customers, was facing a situation wherein the utilities were approaching limits to capacity and, in turn, the need to expand capacity. Since the cost of replacing or expanding existing water and electric systems had risen substantially relative to the cost of constructing the Department's existing systems, Pasadena decided to evaluate whether fair rate treatment of existing customers required the establishment of a "cost of development" policy that assesses a connection fee to new service demands.

***Pennsylvania Public Service Commission, Harrisburg, Pennsylvania***

As part of an audit team retained by the Pennsylvania Public Service Commission, RMI reviewed the integrated least-cost plans and planning methods of Pennsylvania Electric Company (Penelec), Metropolitan Edison Company (MetEd), and General Public Utilities Services (GPU). Penelec and MetEd are operating companies held by GPU. RMI's team included experienced utility planners, distribution and power supply engineers, and rate

design specialists. RMI was responsible for reviewing the following utility functions and processes: load and energy forecasting; conservation and load management; marketing and market planning; integrated resource planning; curtailable rates; power outage management; distribution planning; and system dispatching and pooling.

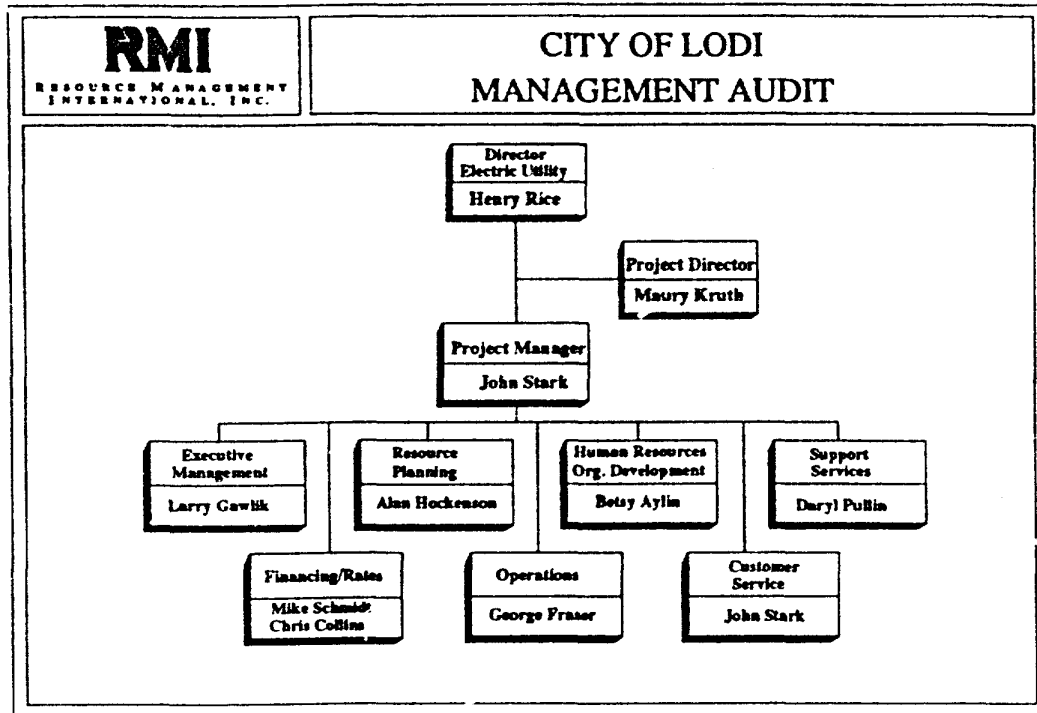
Issues addressed in this review included assessment of the role of GPU, as the holding company, in the planning for the needs of Penelec and MetEd. The potential for cross-subsidization between the operating companies was also a focus of the review by RMI. A detailed report presenting findings and recommendations on the methods, data relied upon, and documentation of the components to the least-cost plan was prepared and submitted to the Commission with the remainder of the audit report.

*Connecticut Department of Public Utility Control, New Britain, Connecticut*

RMI performed an audit of the planning, design, construction, and operation and maintenance of the transmission and distribution systems of Connecticut Light and Power Company and the United Illuminating Company. The assignment included review of outage records, quality of service, and construction, operating, and maintenance budgets for transmission and distribution. Key utility management and staff were interviewed and fact-finding hearings were held, and a customer survey relating to the quality of service was conducted. Findings and recommendations for changes in planning, policy, design, construction, operation, and maintenance were provided to the DPUC, which many of which have been implemented. Connecticut Light and Power Company has also implemented many of the informal recommendations made by RMI that were not ordered by the DPUC.

## SECTION 4

## ORGANIZATION & STAFF



The following are brief summaries of the RMI team. Their resumes are included in Appendix A.

**John Stark** has more than 20 years of combined experience in the electric, gas, and water utility industry and will serve as project manager. Mr. Stark has a broad background and specializes in performing comprehensive management reviews of utilities, with specific emphasis on executive management, customer services, and marketing. During the last five years, Mr. Stark has been a project manager for more than ten comprehensive management reviews within the electric, gas, and water industries.

**Maury Kruth** is a Professional Engineer in 28 states and a Vice President of RMI. He has extensive experience and expertise in the energy and environmental areas, and has worked throughout Northern California for electrical utilities. He will serve as project director on this assignment. Mr. Kruth has served as project manager for a number of resource



evaluation and development, strategic planning assessments, and organizational review.

**Alan Hockenson** is an electrical engineer with over 16 years of experience specializing in resource planning, contract development, negotiation, and project management of electric generating and transmission facilities. He will assist John Stark and will provide day-to-day point of contact between RMI and the City. He has experience in preparing resource plans in support of a utility's filing of a Common Forecasting Methodology before state energy commissions as well as for consideration of future resource acquisitions, new project development, and annexation of new service territory.

**Larry Gawlik** is responsible for RMI's management consulting practice. Mr. Gawlik has over 20 years of experience working both within the utility industry and as a consultant to the industry. He has extensive executive management consulting and audit experience. For approximately nine years, he worked in municipal government. He served as Director of Planning and Assistant General Manager for the electric, water and wastewater systems of Gainesville, Florida and Brownsville, Texas, respectively. His background includes both studying the utility systems and implementing utility projects. During that time he was responsible for capital improvements, transmission and distribution facilities, user charges and capital financing.

**Dr. Michael Schmidt** is a regulatory economist at RMI with over 20 years of experience in the areas of utility ratemaking, cost recovery mechanisms, impact and correction fees, and regulatory processes associated with public utility operations. He has been involved in over 40 assignments concerning full cost recovery, impact fees, revenue requirements, rate design, utility efficiency, energy conservation, and demand forecasting. In addition, Dr. Schmidt has authored numerous articles and two books regarding cost-of-service and rate design issues, and has presented numerous seminars on ratemaking topics, and teaches regulatory economics and litigation economics at the university level.

**Chris Collins** is an economist with over six years of experience in the utility industry. He provides economic analysis and financial expertise in the areas of finance and utility rate analysis. Mr. Collins has developed cost-of-service and rate design models for utilities. Additionally, Mr. Collins has provided assistance in the development of load forecasts and has provided negotiation assistance in the resolution of cost-of-service, cost

allocation, and rate design issues in rate case proceedings before public utility commissions.

**George Fraser** has over 25 years of experience as an electric utility engineer and management consultant. Mr. Fraser has extensive experience in assessing service reliability and operation and maintenance programs. He has direct experience in interviewing division operations personnel and executives regarding establishment, documentation, and execution of operations and maintenance programs. In addition, Mr. Fraser has reviewed numerous organizations, equipment, policies, and programs and distribution system facilities to make recommendations for improving operations and maintenance efficiency.

**Betsy Aylin** has 20 years of experience in human resources, organizational development, and training. She has provided consultation to all levels of management on various organizational problems and issues, including strategic planning, performance evaluation, team building, reorganization, conflict mediation, cultural change, and coaching with directors and managers. Dr. Aylin has particular expertise in performance management and in helping organizations establish quality improvement and employee participation programs. In addition, Dr. Aylin has conducted organizational reviews with recommendations for improving effectiveness and productivity.

**A. Daryl Pullin** has over 20 years of experience specializing in conducting management audits, technical/economic studies, audits, as well as providing expert testimony. He recently participated in the completion of a benchmarking assessment of the purchasing, storage, inventory control, work force management, and transportation practices for over 15 utilities. Mr. Pullin has conducted numerous management audits as well as other support services to determine if technical requirements had been achieved and to examine budget to cost relationships.

## APPENDIX A

## RESUMES

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### JOHN M. STARK

Mr. John Stark has more than 20 years of combined experience as a staff member of the New York State Public Service Commission (NYSPSC) and as a consultant in the utility industry. Mr. Stark has a broad background in performing comprehensive management reviews of utilities, with specific emphasis on executive management, customer services, and marketing. In total, Mr. Stark spent approximately 12 years with the NYSPSC, and was directly involved in the Commission's Management Audit Section and the Tariff Analysis Section. During the past five years, Mr. Stark has been a Project Manager and/or Lead Consultant for more than 14 reviews of utilities within the gas, electric, and water industries.

#### EDUCATION

B.S. - Ohio State University

#### PROFESSIONAL HISTORY

New York State Public Service Commission  
Project Manager

#### REPRESENTATIVE PROJECT EXPERIENCE

Project manager for the stratified management audit of Pennsylvania Power & Light Company for the Pennsylvania Public Utility Commission. This audit is designed to focus on areas with opportunities for cost savings or improved service for ratepayers.

Project manager for the management audit of Central Maine Power for Maine Public Utilities Commission. This is the first management audit performed by the Maine PUC of Central Maine Power and it will focus on Executive Management, Executive Compensation, Executive, Customer Service, and Management Efficiency and Control.

Lead consultant for the evaluation of customer service activities as part of the management audit of Apollo Gas Company and Carnegie Natural Gas Company for the Pennsylvania Public Utility Commission. This review included an assessment of the Company compliance with PPUC's Chapter 56 collection procedures.

Lead consultant for an evaluation of all customer services and marketing functions in the commission-mandated management audit of Columbia Gas of Kentucky. The study lead to recommendations for the organization and operation of

customer service and for improving the company's market share.

Project manager for management audit of GTE for Tennessee Public Service Commission. Review focused on evaluation of cost structures within jurisdictions, in both an incurred and distributed basis, and includes assessment of efficiency of service providers, fairness in pricing (allocation bases), and value received versus cost paid. Functional responsibilities include customer services, operator services, product management, product advertising, sales, and human resources.

Consultant for an analysis of potential performance gains at New York Telephone for the New York Public Service Commission. Responsibilities included the development of an index to measure and evaluate New York Telephone's service quality, and the identification of future and current revenue enhancement opportunities.

Project manager for a focused study of Rochester Telephone Corporation for the New York Public Service Commission. Mr. Stark led a team of six consultants in the areas of customer service, affirmative action, work force management, and manpower planning. The study resulted in recommendations for operational and managerial improvements.

Lead consultant for the evaluation of customer service practices and activities as part of the management audits of Jamaica Water Supply Company and Spring Valley Water Company for the New York Public Service Commission. The study identified the underlying causes of escalated complaints and corporate barriers to improving customer satisfaction.

Lead consultant for a focused audit of South Central Bell Telephone Company of Kentucky to determine the results of the Kentucky Public Service Commission's adoption of an incentive plan and its effects on service levels. Mr. Stark was primarily responsible for reviewing the customer service function, including performance measurement and operations.

Lead consultant for the evaluation of customer service practices and activities as part of the management audit of

Consolidated Edison Company of New York for the New York Public Service Commission. The study identified the underlying causes of escalated complaints and corporate barriers to improving customer satisfaction.

Lead consultant for a review of customer services activities in a management audit of Bell of Pennsylvania. The study led to recommendations for centralization, and identified potential dollar savings as well as alternative approaches to monitoring customer satisfaction.

Lead consultant for the commission-mandated review of innovative consumer rate mechanisms at South Central Bell of Alabama and Alabama Power Company. Mr. Stark was responsible for one of six basic areas of inquiry — compliance with Alabama Public Service Commission and State of Alabama regulatory requirements.

**PROFESSIONAL  
MEMBERSHIPS**

Institute of Management Consultants

**MAURY KRUTH**

Mr. Kruth is a Professional Engineer in 28 states and a Vice President at RMI. He has extensive experience and expertise in the energy and environmental areas, including solid and hazardous waste management.

**EDUCATION**

M.S. - Civil Engineering with Specialty in Environmental Engineering  
Stanford University, Palo Alto, California

M.B.A.  
Xavier University, Cincinnati, Ohio

B.S. - Civil Engineering  
Stanford University, Palo Alto, California

**PROFESSIONAL HISTORY**

U. S. Western Area Power Administration,  
U. S. Department of Energy,  
Assistant Area Manager for Power Marketing, Sacramento Area Office

U. S. Department of Energy,  
Senior Engineer

U. S. Environmental Protection Agency, Chief California Section, Enforcement Division, EPA Region IX

U. S. Public Health Service, Office of Solid Waste Programs, Commissioned Officer (Lt. j.g.)

**REPRESENTATIVE PROJECT EXPERIENCE**

Served as the project manager for a number of resource evaluation and development projects, including managing the effort to identify and evaluate available power resources.

Prepared management plans for all of the Environmental Protection Agency's regional offices. Supervised the preparation of enforcement actions against air, water and solid waste violators for Region IX. Served as a Project Manager in the solid waste program for planning grants to state and local agencies.

Managed several resource planning efforts for large power systems. For one municipality, managed the preparation of a

20-year load forecast and resource plan that was formally submitted to and examined by a state regulatory commission.

Project manager for a municipal utility district's strategic review of its resource options.

Provided oversight and review in the development of the first strategic plan for a municipal utility.

Served as project manager in the preparation of the strategic planning documents associated with a utility's project that examined options for a 900-megawatt nuclear power plant and its 20-year future power requirements.

Managed the preparation of power resource plans that included demand-side management programs for municipal utilities.

Served as a technical expert on environmental matters in the Office of Policy and Environment and managed the preparation of major federal environmental impact statement's for Department of Energy programs and projects.

Served as project manager on a number of energy and environmental projects.

#### **PROFESSIONAL MEMBERSHIPS**

American Society of Civil Engineers

California Society of Professional Engineers

#### **REGISTRATIONS**

Registered Civil Engineer, Alabama, Arizona, Arkansas, California, Colorado, District of Columbia, Florida, Hawaii, Idaho, Indiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Mexico, New York, Oregon, Pennsylvania, Texas, Utah, Vermont, Virginia, Washington, Wyoming.

#### **SELECTED PUBLICATIONS**

"Creating a Countywide Solid Waste Management System - The Case Study of Humphreys County, Tennessee," U. S. Environmental Protection Agency, 1972. Coauthors: D. H. Booth and D. L. Yates.

**HONORS AND  
FELLOWSHIPS**

Federal Water Pollution Control Fellowship at Stanford

Federal Energy Administration Certificate of Superior Service



**ALAN L. HOCKENSON**

Mr. Hockenson is an electrical engineer with over 16 years of experience specializing in resource planning, contract development, negotiation, and project management of electric generating and transmission facilities. He has experience in the areas of economic analysis, regulatory siting processes, and contract litigation support.

**EDUCATION**                      B.S. - Electrical and Electronics Engineering  
California State University, Chico

**PROFESSIONAL HISTORY**              California Department of Water Resources,  
Associate Electric Utilities Engineer

**REPRESENTATIVE PROJECT EXPERIENCE**      Prepared a resource plan for a utility in consideration of future resource acquisitions, new project development, and annexation of new service territory.

Performed analysis of the members' collective generation requirements in support of resource decisions of a joint powers agency.

Prepared resource plans in support of a utility's filing of a Common Forecasting Methodology before a state energy commission.

Performed production cost model simulations of a large electric utility.

Managed many of the day-to-day administrative functions associated with a joint powers agency ownership in a coal-fired generating resource through dealing with representatives of other utilities in the areas of generation engineering, fuels management, accounting, contracts, public relations, risk management, financial management, and scheduling and dispatching.

**PROFESSIONAL MEMBERSHIPS**              Institute of Electrical and Electronics Engineers

**REGISTRATIONS**                      Registered Electrical Engineer: Alabama, Arizona, California, District of Columbia, North Carolina, and Rhode Island.

**LARRY GAWLIK**

Mr. Gawlik is a Senior Vice President at RMI and a registered Professional Engineer with over 20 years of diverse utility engineering and management consulting experience. He has been extensively involved in strategic, tactical and resource planning, capital financing programs, regulatory management, contract negotiations and operational and management auditing assignments with electric, gas and water utilities.

**EDUCATION**

M.B.A.

University of Texas, Austin

B.S. - Electrical Engineering

University of Florida, Gainesville

Management Development Programs

The Washington Campus and University of Texas, Austin

Graduate Studies in Advanced Power System Planning,

University of Florida, Gainesville

**PROFESSIONAL  
HISTORY**

Greiner Engineering, Inc.,

Associate and Regional Manager

Public Utilities Board of Brownsville,

Assistant General Manager

Gainesville Regional Utilities,

Director of Planning

**SELECTED  
ENGAGEMENTS**

Participated on the five-person Public Review Committee responsible for overseeing the management audit of the Guam Power Authority. The audit was directed at examining efficiency improvements in the areas of power production, transmission and distribution operations, executive management, procurement practices, and billing, collecting, and customer service.

Conducted a series of public hearings designed to elicit customer attitudes concerning water quality and the cost of water services.

Responsible for the preparation of a long-range distribution system plan, including preparation of a load forecast, five-year

capital improvement program, scheduled maintenance program, and a recommended operating budget inclusive of personnel requirements and duties.

Participated on a multi-national task force examining water supply and quality issues affecting Mexico and the United States along the Rio Grande border.

Directed and participated in the restructuring and/or reorganization of staff and line functions and the development of departmental policies and procedures manuals, including the development of departmental goals and objectives consistent with the overall corporate mission.

Conducted an organizational review and developed a performance-based pay plan for utility management and professional employees.

Responsible for the development of computerized management information systems for inventory control, cost accounting, work order systems, and continuing property records in accordance with Federal Energy Regulatory Commission uniform system of accounts.

Responsible for the development of a cost allocation study which allocated joint and common costs to multiple utility functions within a combined utility system.

Directed the preparation of an organizational review of the key management and staff requirements for the maintenance of reliable utility operations during an ownership transition.

Had overall responsibility for the assessment of a multi-utility management audit performed for a utility commission examining operations planning, power outage management, transmission and distribution performance, interruptible power and power pooling, and economic dispatching.

Responsible for the review of legislation concerning the creation of joint action agencies for the purposes of constructing electric generating facilities. This investigation involved critiquing the legislation from a resource planning, organizational and decision-making perspective.

Served as principal investigator for a state legislature examining the potential administrative and operational benefits and/or impacts of the consolidation of two regulated electric companies.

Directed and participated in the development of capital and operating budgeting systems inclusive of organizational responsibilities, staffing levels and experience, information flow and management reporting requirements.

Prepared feasibility assessments in connection with the formation of electric, water and gas utilities. These studies included the evaluation of acquisition costs, forecast of future requirements, estimates of annual revenues and operating costs, forecast of financing requirements and the development of pro forma operating results.

Directed a review of the operations and maintenance practices. This review concentrated on practices regarding the utilities' transmission and distribution systems, including tree trimming, line patrol and other preventative maintenance activities.

#### **PROFESSIONAL MEMBERSHIPS**

Institute of Electrical and Electronic Engineers, Senior Member

National Society of Professional Engineers

California Society of Professional Engineers

American Water Works Association

#### **REGISTRATIONS**

Registered Professional Engineer, States of Texas and Florida

#### **SELECTED PUBLICATIONS**

"PURPA Requirements - What Do They Mean To Your Utility?", Presented during the 1980 Texas Public Power Association Annual Meeting

"Transmission and Distribution System Reliability Audits: An Emerging Trend," presented during the 1991 Edison Electric Institute Annual Meeting held in Columbus, Ohio

**HONORS AND  
FELLOWSHIPS**

Tau Beta Pi - National Engineering Honorary Society

Eta Kappa Nu - National Electrical Engineering Honorary  
Society

Beta Gamma Sigma - National Business Honorary  
Society

**DR. MICHAEL SCHMIDT**

Dr. Schmidt is Chief Regulatory Economist for RMI with more than 20 years of experience in the areas of utility ratemaking, project analysis, economics, distribution planning, and engineering. He has been involved in major rate cases concerning revenue requirements, rate of return, utility rate design, time-of-day and seasonal pricing, utility efficiency, automatic adjustment clauses, energy conservation, and demand forecasting.

**EDUCATION**

Ph.D. - Business Administration Transportation/Public  
Utilities and Business Economics/Public Policy  
Indiana University, Bloomington

M.B.A. - Public Utility Management and Finance  
Indiana University, Bloomington

B.S. - Physics/Math

B.A. - Business Administration

University of Minnesota, Minneapolis

**PROFESSIONAL  
HISTORY**

R. W. Beck and Associates,  
Associate, Manager Analytical Section

Illinois Commerce Commission,  
Manager of Policy Analysis and Research Division

Public Service Company of Indiana,  
Senior Analyst

Minnesota Power and Light Company,  
Assistant Engineer

**REPRESENTATIVE  
PROJECT  
EXPERIENCE**

Prepared cost of development studies and designed impact fees for several major municipal electric and water clients. Analysis included a discussion of the theoretical foundation for impact fees, analytical techniques in support of the fees, and the development of suggested policy options for implementation of such fees.

Performed numerous cost-of-service and rate design studies for electric utilities. Studies involved revenue requirements, cost allocation, and rate design. Aspects of these studies

included time-of-use rates, interruptible rates, and development of automatic adjustment clauses.

Prepared and directed retail rate studies for water, wastewater, electric, and solid waste utilities. These studies involved forecasting, revenue requirements, cost classification and allocation, and rate design.

Served as Project Manager for cost of service analysis of five municipal electric utilities. Analysis included cost allocation, development of fuel adjustment clause, and rate design.

Served as Project Manager for cost of service and rate design for a 20,000-customer electric utility. Analysis required combination of several rate classes, development of cost based rates, and flat rate design based on season.

Prepared and filed testimony in more than 40 rate proceedings before state regulatory commissions, the Federal Energy Regulatory Commission, state legislative committees, and courts. The subjects addressed in the testimony included cost allocation, rate design, automatic adjustment clauses, load forecast results, cost of capital, engineering economy studies, and the results of various financial analyses.

Presented numerous seminars on ratemaking and economics topics for the American Public Power Association and other clients. Seminar topics have included utility pricing policy, strategic pricing, industrial incentive rates, automatic adjustment clauses, time of use rates, and topics in law and economics.

Developed and presented seminar on ratemaking policy for board members and other policy makers. Seminar topics included strategic pricing, rates for demand side management, marginal cost versus embedded cost ratemaking techniques, and new connection policies.

#### PROFESSIONAL MEMBERSHIPS

American Economic Association

#### SELECTED PUBLICATIONS

The Automatic Adjustment Clauses--Theory and Practice.

Institute of Public Utilities, Michigan State University Press, 1980.

Retail Rate Design for Publicly Owned Electric Systems, American Public Power Association, 1984.

A Study Guide For Law and Economics, Golden Gate University, 1992.

Authored numerous articles and two books regarding cost of service and rate design issues, including Retail Rate Design for Publicly Owned Utilities, published by the American Public Power Association; and Automatic Adjustment Clauses Theory and Practice, published by the Institute of Public Utilities at Michigan State University.

**HONORS AND  
FELLOWSHIPS**

Beta Gamma Sigma



**CHRIS COLLINS**

Mr. Collins is an economist with over six years of experience in the utility industry. He provides economic analysis and financial expertise in the areas of forecasting and utility rate analysis, litigation support, and natural gas services.

**EDUCATION**

B. A. - Economics  
University of Texas, Austin

Graduate-level courses in Economics  
University of Texas, Austin

Graduate-level courses in Business  
University of Houston

**PROFESSIONAL  
HISTORY**

Tenneco Gas, Inc.,  
Rate Analyst

Public Utility Commission of Texas,  
Rate Analyst

RRC, Inc.,  
Economic Consultant

**REPRESENTATIVE  
PROJECT  
EXPERIENCE**

Designed and developed cost-of-service models used to evaluate rate requests submitted by cooperatives, government-owned utilities, and investor-owned utilities involved in rate case proceedings.

Designed and calculated customer class rates, fixed fuel factors, and power cost recovery factors in electric utility rate cases. Also, designed and developed several types of interruptible rates, cogeneration supplemental standby rates, and cogeneration maintenance rates for several utilities.

Reviewed and evaluated various residential, commercial, and industrial rate designs of cooperatives, government-owned utilities, and investor-owned utilities for a public utility commission for the purpose of adjusting rates charged by electric utilities involved in rate requests.

Reviewed and evaluated various innovative power cost recovery factors rates of cooperatives, government-owned

utilities, and investor-owned utilities for a public utility commission for the purpose of establishing rates charged by electric utilities involved in business assistance.

Assisted in the creation and the development of an industrial rate design policy used by a public utility commission for the purpose of establishing a consistent approach for designing interruptible rates, cogeneration supplemental standby rates, cogeneration maintenance rates, and economic incentive rates.

Performed cost allocation and rate design studies for an interstate pipeline to determine rate and revenue impact of certain allocation methodologies.

Performed cost-revenue studies and calculated revenue requirements for an interstate pipeline to determine the timing of filing of rate cases.

Provided expert witness testimony and appeared for cross examination on behalf of a public utility commission regarding cost allocation and rate design issues in several rate application proceedings.

**GEORGE F. FRASER**

Mr. Fraser is a Registered Electrical Engineer and has over 25 years of electrical engineering and utility management experience. His broad and varied career includes extensive transmission and distribution planning and engineering and electric utility operation and maintenance management experience. He administers and provides management oversight to RMI Utility Services' operating divisions.

**EDUCATION**

B.S. - Electrical Engineering  
University of Nevada, Reno

Executive Program Certificate  
University of California, Davis

**PROFESSIONAL  
HISTORY**

R. W. Beck and Associates,  
Special Consultant

Sacramento Municipal Utility District,  
Director of Resource Development

Sacramento Municipal Utility District,  
Manager, Distribution Construction and Planning Departments

**REPRESENTATIVE  
PROJECT  
EXPERIENCE**

Audited the service reliability and operation & maintenance programs of one of the nation's largest investor-owned utilities. Interviewed numerous division operations personnel and corporate executives regarding maintenance program establishment, documentation, and execution. Observed transmission, substation, and distribution facilities to evaluate maintenance program effectiveness. Worked on a project team which prepared an extensive list of findings and recommendations.

Audited the reliability and power quality of a large investor-owned utility. The audit included extensive site visits, interviews, and review of organization, equipment, policies and programs, and distribution system facilities. The resulting report and recommendations were accepted by a state commission and the utility.

Audited the planning, preparation, and management of major storm power outages of two large investor-owned utilities. The utilities' management, organization, and operations

facilities were key issues in the review. The audit included interviews with central office and regional personnel, as well as reviews of records of operations during storms. The report and recommendations were accepted by a state commission and the utility.

Reviewed the substation maintenance program budgets and procedures of a municipal utility. This included reviewing program documentation, interviewing maintenance personnel, and inspecting equipment to evaluate program effectiveness. Prepared detailed recommendations for the development of a maintenance manual.

As manager of the distribution construction department at an electric utility, administered a 500-person department which included divisions responsible for substation installation and maintenance, overhead transmission and distribution lines, underground transmission and distribution lines, tree trimming, installation and meter maintenance, and resolution of all technical operations problems. Initiated a cost cutting program which reduced department size by over 15 percent through attrition.

Served as Consulting Project Manager for a municipal utility's Work Effectiveness Program. This was an organizational development program in which a three-person consultant team helped establish and supported an employee task force working on numerous projects aimed at improving the effectiveness of the group's work activities and communications. The consulting team also worked closely with the client's management group and helped them establish and maintain control over the project.

As a Utility Department Manager, implemented an organizational self-improvement program in a transmission and distribution construction department. This program resulted in re-defining the jobs of supervisors and managers and improved communications. Part of this program focused on the training of foremen, supervisors, and superintendents regarding their role in a well-run organization.

#### REGISTRATIONS

Registered Professional Electrical Engineer, California

**SELECTED  
PUBLICATIONS**

"Excellence in Distribution Systems." Presented to the APPA Engineering and Operations Workshop in New Orleans, March 15, 1988.

"Alternatives for City-Utility Relationships." Presented to the National Franchising Conference, October 6, 1989.

**HONORS AND  
FELLOWSHIPS**

National Chairman - APPA Engineering and Operations Workshop.

Served for two years on EPRI's Electric Systems Division Committee.

**DR. ELIZABETH (BETSY) AYLIN**

Dr. Aylin has 20 years of experience in human resources, organization development and training including designing and teaching "Train the Trainer" courses. She has provided consultation to all levels of management on various organizational problems and issues, including strategic planning, performance evaluation, team building, reorganization, conflict mediation, cultural change, and coaching with directors and managers. Dr. Aylin has particular expertise in performance management and in helping organizations establish quality improvement and employee participation programs. In addition, Dr. Aylin has conducted organizational reviews with recommendations for improving effectiveness and productivity.

**EDUCATION**

Ph.D. - Adult Education and Human Resource  
Development  
University of Texas, Austin

M. A. - Theology  
Episcopal Seminary of the Southwest, Austin, Texas

B.A. - Religion and English  
Randolph-Macon Women's College, Lynchburg, Virginia

**PROFESSIONAL  
HISTORY**

City of Austin Electric Utility Department,  
Manager of Organization Development

Texas Department of Health,  
Organization Development Specialist

NuStats, Inc.,  
Director of Training and Education

**REPRESENTATIVE  
PROJECT  
EXPERIENCE**

Carried out a study of a human services office to assess effectiveness of communication clarity of roles and responsibilities, sense of unity and common purpose, and appropriateness of structure. Conducted a survey and interviews to identify problems. Made recommendations and held follow-up meetings with staff to resolve problems and deal with issues of concern.

Conducted a survey of supervisory staff in the newly reorganized production division of a large utility to assess morale and general climate of the division and to identify existing problems and needs. Held report-out meetings and

facilitated a follow-up planning meeting to resolve identified issues.

Held focus group interviews with protected classes (women and minority groups) working in a utility organization to assess level of satisfaction with the organization and to identify problems encountered.

Conducted a survey of employees and supervisors in a large utility to determine satisfaction with the performance appraisal system and to identify common practices in conducting appraisals and areas of needed change.

Conducted strategic planning sessions and retreats with the top management of a large electric utility and in other divisions of a city organization to set vision and mission and identify annual goals.

Provided consultation with individual managers, directors, and officers on management and organizational issues, including performance problems, communication with employees, supervisory changes, and work environment concerns.

Met with work groups including utility electricians, accountants, and public health nutritionists to both identify respective group missions and clarify roles and responsibilities linked to evaluation.

Conducted several courses in the area of customer service, including receipt of customer trouble calls, handling difficult customers, assessing customer needs, and creating a orientation toward customer service.

**PROFESSIONAL  
MEMBERSHIPS**

American Association of Adult and Continuing Education

Central Texas Organization Development Network

National Organization Development Network

American Society of Training and Development

**HONORS AND  
FELLOWSHIPS**

Member of Delta Kappa Education Honor Society

Member of Phi Delta Phi Honor Society



**A. DARYL PULLIN**

Mr. Pullin is an Executive Consultant in the utility industry specializing in conducting management audits, technical/economic studies, audits, as well as providing expert testimony. His experience includes engineering management, internal consulting, and design engineering for internationally respected engineering/construction firms. Mr. Pullin has conducted numerous management audits as well as other support services to determine if technical requirements had been achieved and to examine budget to cost relationships.

**EDUCATION**

M.S. - Business Administration  
University of Houston

B.S. - Mechanical Engineering Technology  
Fairleigh Dickinson University

**PROFESSIONAL  
HISTORY**

TEAMSS Consulting,  
Owner and Executive Consultant

Hawks, Giffels & Pullin, Inc.,  
Vice President and Executive Consultant

Brown & Root, Inc.,  
Department Manager, Project Manager, Internal Consultant  
and Project Engineer

Burns & Roe, Inc.,  
Senior Engineer

**REPRESENTATIVE  
PROJECT  
EXPERIENCE**

Managed a team of consultants conducting an evaluation of automated information system requirements for a large bank holding corporation. This project resulted in the successful development and implementation of a comprehensive computerized information management system for the corporation and training for the personnel involved.

Provided expert testimony for the Public Utility Commission of Texas. The testimony addressed and evaluated the reasonableness and necessity of costs incurred by an electric utility company involved in both civil and administrative litigation concerning the construction and management of a nuclear power plant. The study evaluated processes used by the company in managing its costs, including selection and

contracting for services, applicability of services and level of review, and the amount of specific expenses/rates charged.

Retained by a west coast utility company facing a decision on the purchase of a coal-slurry pipeline. The strategic analysis evaluated economic and logistical factors designed to provide the utility company with information on which to base purchase alternatives and pricing, and to examine the risks involved.

Managed the Technical Litigation Support Team in the defense for an extremely large and complicated lawsuit surrounding the engineering and construction of the South Texas Nuclear Project. Directed the activities of a team of internal and outside consultants, engineers, computer specialists and other support personnel reporting to the company's Senior Vice President and Corporate Counsel. Supervised the performance of construction cost comparison studies and regression analyses, regulatory impact studies, evaluations of project management decisions, and analyses to reconstruct the facts of the case. Participated in the development of pretrial strategy and served as a technical expert witness.

Served as Manager of the Electrical/Instrumentation Engineering Department. Responsibilities included the management and direction of engineers and specialists, manpower projections and hiring, personnel assignments to active projects; department budget development and tracking; personnel evaluations, salary administration, training and career planning; preparation of department written procedures and insuring technical quality for all engineering products.

As Project Engineer for one of the primary engineering disciplines on a large power plant design project, had direct responsibility for the work activities of over four Instrumentation & Control engineers, technicians, designers and clerks. Mr. Pullin developed and managed a budget valued at over \$40 million and engineering services and equipment. He was also charged with the implementations of industry standards and regulations in the design of this highly technical and complex projects.

**PROFESSIONAL  
MEMBERSHIPS**

American Society of Mechanical Engineers



**RMI**

RESOURCE MANAGEMENT  
INTERNATIONAL, INC.





## Resource Management International, Inc.

*"RMI's culture is built  
around a team concept. Our  
clients not only benefit from  
the proper mix of experi-  
enced people, but from the  
enthusiasm generated by  
this camaraderie."*

Today's complex world is changing rapidly, creating unprecedented challenges and opportunities. A steadily increasing population is placing an ever-growing demand on the earth's finite resources. At the same time, new technologies are continuing to emerge, while government policies are becoming more extensive and environmental pressures more demanding.

Resource Management International, Inc., is a consulting firm with in-depth knowledge of energy, water, land, and air resources. With our team of experienced professionals dedicated to the long-term interests of our clients, we are able to effectively meet the evolving needs of our diverse domestic and international client base.

At RMI, we approach our business just as you do, focusing on our customers and the various environments in which they operate. We recognize that assignments are often multifaceted, requiring an awareness of social and political sensitivities as well as their unique technical, environmental, financial, and economic aspects. RMI balances all of these elements, offering clients a broad and complete perspective on issues from one knowledgeable and responsive source.

RMI places a strong emphasis on creating productive working relationships with clients. We work closely with you, becoming an integral member of your team. Because RMI believes that teamwork is the key to success, our professionals are committed to responsive service, attention to detail, and effective communication and cooperation.



## A Diversity of Services

In the face of rapidly changing technological, economic, and competitive environments, organizations must be able to adapt quickly and efficiently in order to succeed. RMI offers a wide range of services to help utilities, industrial concerns, corporate and professional firms, and governments successfully meet the needs of today and conquer the challenges of tomorrow.

In a given year, RMI responds to a diversity of assignments, large and small, simple and complex, specialized and broad-based. We can provide consultation on a specific problem or complete project management, enabling clients to use one, all, or any combination of our services:

- Management Consulting
- Supply Planning
- Demand-Side Management
- Integrated Resource Planning
- Transmission and Distribution Services
- Engineering Services
- Electrical Design
- Environmental Services
- Regulatory Management
- Economic and Financial Services
- Natural Gas Services
- Technology Assessment
- Litigation Support
- Contract Negotiation and Analysis
- Project and Construction Management
- Communication Services
- Organizational Development and Training
- International Services

The offices of RMI and its subsidiaries are strategically located to support our clients in meeting new challenges and pursuing promising opportunities. Our services are provided from Phoenix, Arizona; Bakersfield, Glendale, Novato, and Sacramento, California; Denver, Colorado; Washington, DC; Orlando and West Palm Beach, Florida; Albany, New York; Columbus, Ohio; Portland, Oregon; and Austin, Texas. Our widespread presence ensures that each assignment is successfully accomplished by professionals well versed in both regional and national issues, personally known by and accessible to the client, and assisted by a strong support staff.

*RMI has a proven record of success serving both the public and private sectors, including:*

- *Utilities: Electric, natural gas, water, wastewater, waste management, and telecommunications.*
- *Business and Industry: Law firms, financial institutions, independent power producers, non-utility generators, energy companies, natural gas producers, mining, transportation, and large industrial concerns.*
- *Government: Municipal, county, state, and federal agencies.*







## Experienced Teamwork

Teamwork is the driving force behind RMI's ongoing success. It begins in our own offices, with our own staff, and extends to our relationships with clients.

*"Long-term relationships are particularly satisfying. The understanding developed with a client on previous assignments is carried over to the next project, strengthening the foundation from which we provide our services."*

To meet the growing demand for our services, RMI draws on a professional team of project managers, planners, engineers, natural resource scientists, regulatory and public policy strategists, economists, and public communication specialists, each of whom combines firsthand industry experience with his or her own consulting expertise. Moreover, many of our personnel have held senior management positions in organizations like yours.

RMI professionals bring to clients their individual abilities as well as the synergy of their combined expertise and experience. Further, they are supported by the latest computer equipment and technology, including an integrated information and telecommunications system.

As an RMI client, you work closely with dedicated professionals throughout all phases of your assignment. It is this kind of close working relationship that sets us apart from other consulting organizations: long-term, supportive, and responsive to client needs. And because of our involvement in assignments throughout the world, we are able to apply a broad perspective to accomplish the task at hand.

## RMI Consulting Services

At RMI, we are committed to providing our clients with the highest standard of consulting services. Our assignments range from complex management consulting services to leading-edge technical analyses.

### Management Consulting

In today's competitive business environment, RMI's management consulting services bring clients an insightful perspective to problem solving. RMI provides a team of professionals with intimate knowledge of regulatory, legislative, market, economic, and financial trends to assist management with their business strategies. Our services include strategic corporate planning and marketing, competitive assessments, risk and uncertainty analyses, and management planning and operations evaluations.


RMI supports our clients' objectives every step of the way, from identifying competitive opportunities and threats, to evaluating current strategies and developing goals and implementation plans. The practical application of these services, administered cooperatively with management, helps our clients achieve their goals—realistically and effectively.

### Supply Planning

Growing competition, environmental concerns, independent power production, and a greater range of supply- and demand-side options are adding new dimensions of complexity to supply planning. RMI understands the changing environment in which resource planning is conducted. We bring together the necessary professional expertise and advanced planning models to assist utilities in identifying and evaluating a variety of resource options.

Supply planning demands a mixture of economic, engineering and environmental theory, along with practical experience in utility operations, to focus on the factors that most influence

*Often a problem seems  
from being too close to  
the issue. Good consultants can help their clients  
see the big picture. Good  
consultants will then roll  
up their sleeves and get  
the job done.*



each utility's future. As a reflection of our expertise, RMI performs a broad spectrum of studies, from econometric and end-use forecasts, to production costing and operation analysis, to identifying an appropriate clean air compliance plan. Our professionals look at every aspect of a client's operating environment to help develop a balanced, yet flexible, resource plan. RMI also assists with the competitive bidding process, including preparing requests for bids, screening and selecting bids, and negotiating contracts.

## **Demand-Side Management**

Resource costs are rising, siting and licensing of supply-side resources are becoming more complex, and environmental compliance standards are becoming more stringent. At the same time, regulatory agencies are requiring greater contributions from demand-side technologies and programs. Faced with these challenges, utilities and end users are pursuing demand-side management, or DSM, to provide a cost-effective alternative or supplement to supply-side resources.

RMI offers expertise in the planning and development of DSM strategies, beginning with program analysis and extending through design, implementation, program tracking, and evaluation. With the aid of sophisticated planning models, we can analyze a wide range of DSM options to meet varied demand-side objectives. Because of our understanding of customer energy needs and our knowledge of DSM technologies, RMI is able to develop practical solutions that promote customer participation, and are cost-effective and appropriate to each client's unique operating and market characteristics.

RMI assists clients in tracking and evaluating their DSM efforts. Our services provide a framework for not only assessing the impacts of DSM programs, but also gauging the effectiveness of implementation and administrative processes. RMI can also analyze competitive fuels, screen DSM competitive bids, and design innovative rate programs.

## **Integrated Resource Planning**

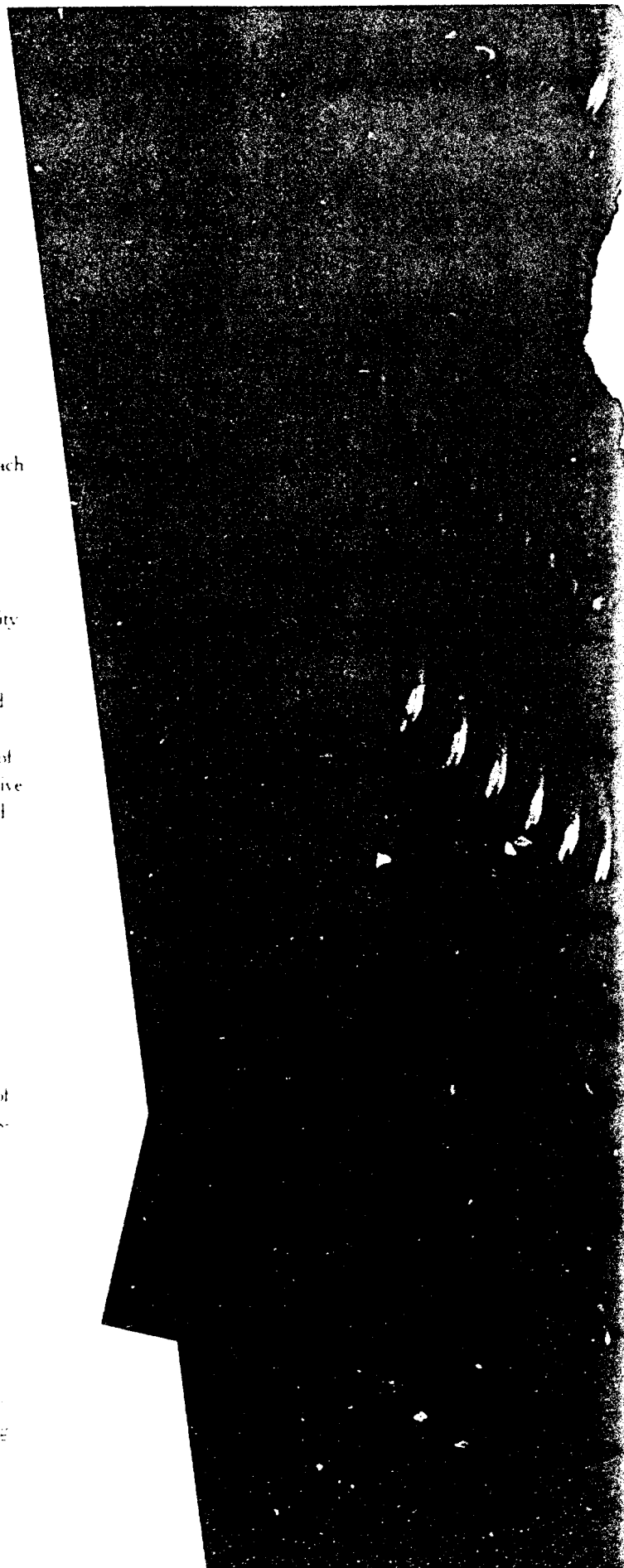
The ability to balance future resource requirements and the economics of demand and supply options is complicated by environmental and regulatory policies, new technologies, and increased competition. Given today's uncertain business climate, utilities must pursue flexible resource plans to remain competitive.

Integrated resource planning, or IRP, is a coordinated approach to the long-term resource planning process. Through IRP, utilities develop the appropriate mix of supply and demand resources to provide reliable, high-value service in a cost-effective and environmentally responsible manner.

The RMI approach to IRP encompasses the full scope of utility planning, including demand- and supply-side technical and economic evaluations, revenue and cost recovery analyses, environmental impact quantification, public involvement, and financial forecasting. In helping clients address each element of the IRP process, RMI focuses attention on a wide variety of key variables. These include availability and costs of alternative technologies; market penetration of conservation and demand management programs; operating costs and constraints; reliability factors; and demographic, economic, regulatory, and legislative trends.

## **Transmission and Distribution Services**

With regional differences in the demand, cost, and supply of electric power, and the relatively high cost of new generating facilities, there is an increased emphasis on the transmission of energy between regions and on the more efficient use of transmission and distribution systems. Nationwide, RMI has analyzed transmission and distribution systems including distribution extensions, substation additions, new substation facilities, and transmission facilities ranging from 115 to 500 kilovolts. We have been involved in every phase of system development, from feasibility studies, preliminary plans, and environmental assessments, through engineering, contract negotiations, construction management, and operations and maintenance. Further, our expertise with load flow, stability and short-circuit analyses enables us to accurately predict the effectiveness of planned facility additions and help in selecting preferred plans and equipment.





## Engineering Services

As systems become increasingly complex and costly, there is an increased need for sound engineering services to secure effective and economically planned facilities. RMI's professional engineers offer the qualifications needed to assist clients in analyzing and planning a range of production, transmission, and distribution projects. Our engineering services extend from initial concept through operations and maintenance. We perform feasibility studies and technology assessments, provide technical designs, prepare construction plans and specifications, procure equipment and material, test system performance, and provide complete on-site construction supervision.

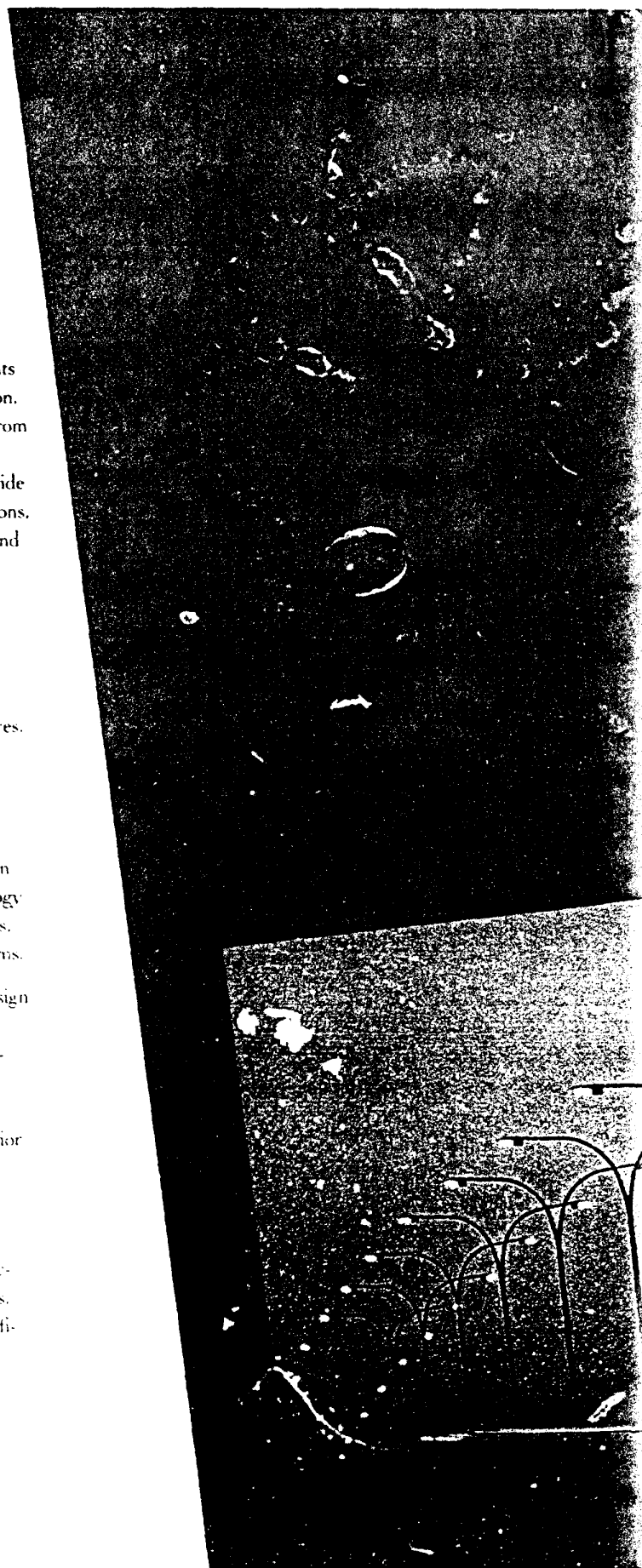
RMI's engineers also offer clients technical expertise in operating and maintaining their facilities. Our capabilities include developing operating procedures and preventive maintenance plans, performing reliability assessments, and recommending system modifications to meet service objectives.

## Electrical Design

RMI is well respected for its engineering excellence in design services. For each assignment, we combine proven technology with innovation to cost-effectively meet changing regulations, demands on system performance, and environmental concerns.

RMI's engineers and design specialists provide electrical design services for power, control, and instrumentation systems associated with water and wastewater plants, waste management facilities, airports, highways, electrical distribution systems, substations, transmission and generation projects, industrial power and control systems, and interior and exterior lighting applications. Our capabilities range from concept through final design, and extend to material procurement, construction management, and project start-up.

RMI's advanced computer-aided design facilities, in conjunction with well-documented, quality-assured design processes, are used to develop high quality technical designs with significant time and cost savings.





## Environmental Services

The growing emphasis on affordable new energy sources, clean water supplies, and sound solutions to waste disposal is creating new environmental challenges. RMI offers a team of environmental engineers and scientists, resource planners, and regulatory specialists with the experience to address complex environmental problems in today's world. Our services range from facility siting, natural resource planning, and environmental regulatory management, to environmental mitigation, compliance monitoring, and public involvement, to solid waste management and land use planning.

RMI's professionals perform resource surveys and sensitivity analyses, conduct routing and siting studies, develop habitat management and mitigation plans, manage public participation and community relations programs, select feasible project alternatives, and prepare environmental assessments and reports. Further, we have a proven record of obtaining environmental approvals. By keeping abreast of legislative developments and regulations, RMI's staff is also able to provide expert witness testimony on environmental and regulatory issues.

The waste management industry demands an integrated approach to waste generation and disposal problems. RMI offers a unique perspective for clients considering such options as source reduction, recycling, composting, waste-to-energy, incineration, and landfilling. Our services include integrated planning, development, and implementation of waste management systems; feasibility and siting studies; alternative technology analyses; environmental assessments; and permit preparation.



## Regulatory Management

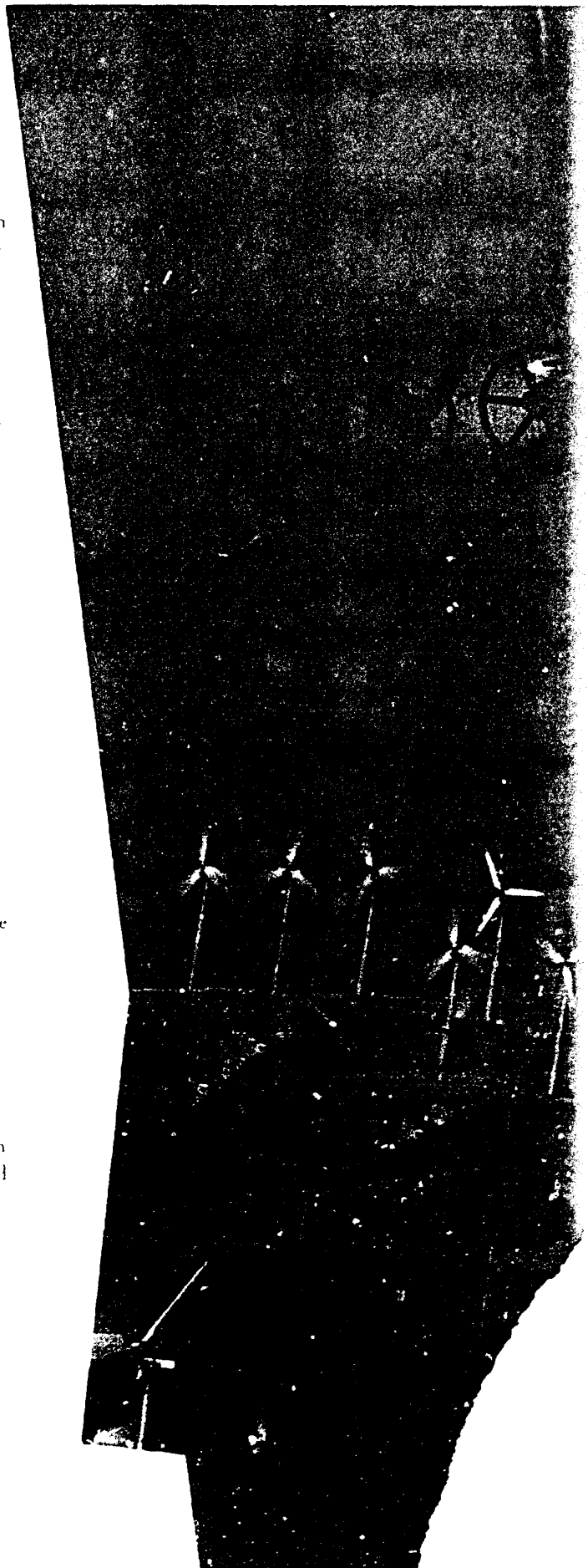
In today's climate of rapid regulatory change, up-to-date knowledge of state and federal policies and their implications is key to an organization's long-term viability. RMI serves a growing demand for regulatory management assistance. Our professionals work with clients to develop regulatory strategies that meet specific short- and long-term goals. We analyze the effects of laws and policies on a client's operations; prepare and process applications for local, state, and federal permits; obtain regulatory approvals; and provide expert testimony on all aspects of our work. Further, RMI assists clients in defining opportunities for policy initiatives and in seeking financing for innovative programs.

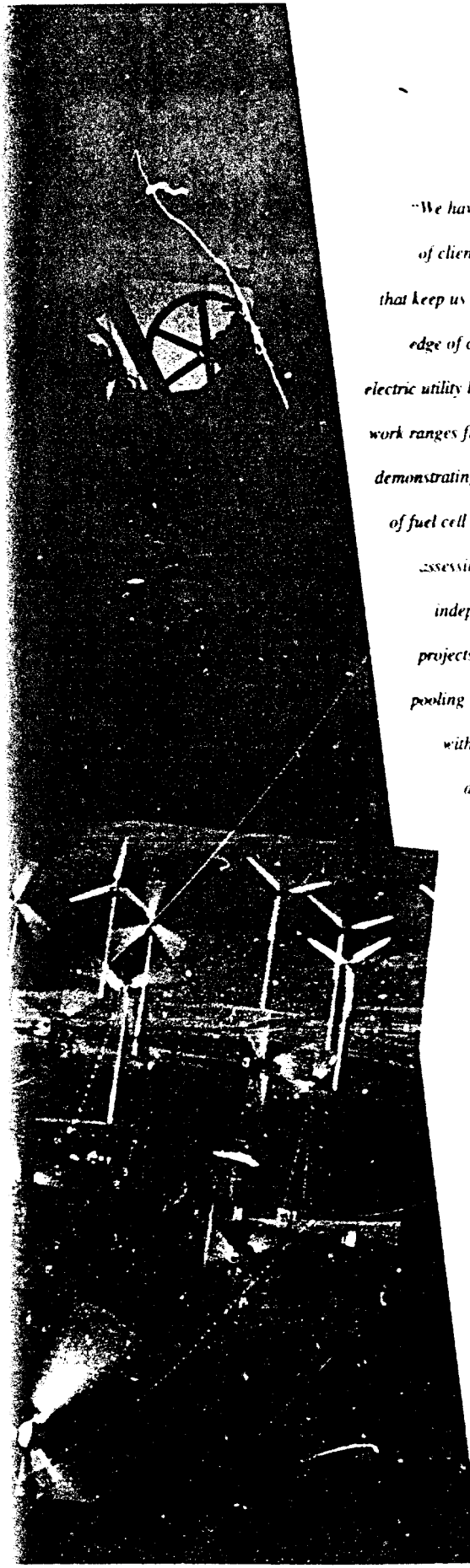
Expediting regulatory reviews through local, state, and federal processes is an RMI specialty. For example, RMI has demonstrated its capabilities in such diverse regulatory management assignments as preparing federal Clean Air Act compliance plans; managing the state and federal permitting for transmission lines; preparing and processing license applications for hydroelectric projects before the Federal Energy Regulatory Commission; managing the approval process for landfills and waste management plans; and providing expert testimony in hearings on competing uses of water.

## Economic and Financial Services

RMI has a long-standing reputation for providing high quality, objective, and well-conceived economic and financial services. We assist a broad range of clients with economic studies in support of new resource additions and operating strategies, including life-cycle evaluations of alternative resource acquisitions, assessments of alternative fuel and materials supply arrangements, and preparation of pro forma financial forecasts. Further, RMI provides services in support of cost recovery programs and user fee studies, ranging from traditional cost-based structures to more innovative value-based ones. Our services include the preparation of revenue requirement projections and cost allocation studies, and the design of new user fee schedules.

RMI also offers a full range of services in support of client financing programs. We assist in the evaluation of overall financing requirements and the development of short- and long-range programs to meet such needs. Our professionals work closely with the investment community in support of client financing programs and have extensive experience working with bond insurance companies, bond rating agencies, investment bankers, and financial and legal advisors.





## Natural Gas Services

*"We have a vast array of client assignments that keep us on the cutting edge of changes in the electric utility business. Our work ranges from programs demonstrating applications of fuel cell technology, to assessing a variety of independent power projects, to emissions pooling in compliance with federal clean air standards."*

With increased deregulation and growing competition, the natural gas industry has evolved into a dynamic business. RMI offers clients a team of natural gas specialists with knowledge from the reservoir, down the gas transportation and marketing chain, to the burner tip of the end user. These professionals provide a complete range of integrated services: exploration, production, and development of gas reserves; reserve and deliverability evaluations; analysis of current and future tariff design; assistance in regulatory management; contracting for gas supplies and transportation; financing large gas acquisitions; and complete fuel management.

RMI's assignment profile is diverse. We assist natural gas utilities in the development of strategic marketing plans.

We support local distribution companies with services ranging from developing detailed business plans for new service territory expansions to performing due diligence reviews for financings; and assist independent power producers in planning the gas supply and in evaluating costs for alternatives to gas-fired power projects.

## Technology Assessment

At RMI, we help clients take advantage of the opportunities being created by today's technologies. Our engineers and analysts are experienced in a broad range of supply- and demand-side technologies, including biomass, geothermal, solar, wind, resource recovery, load control, thermal energy storage, and high efficiency lighting. We also assist clients in implementing new and emerging technologies such as fuel cells, advanced combustion turbine cycles, and coal gasification.

RMI professionals bring to clients an understanding of both conventional and new and emerging technologies. With the firm's knowledge of technological and regulatory developments, combined with our broad experience in resource development and engineering, we assist clients with technology assessments, feasibility studies (from engineering, economic, environmental, and financial perspectives), market research, and project evaluations.

## **Litigation Support**

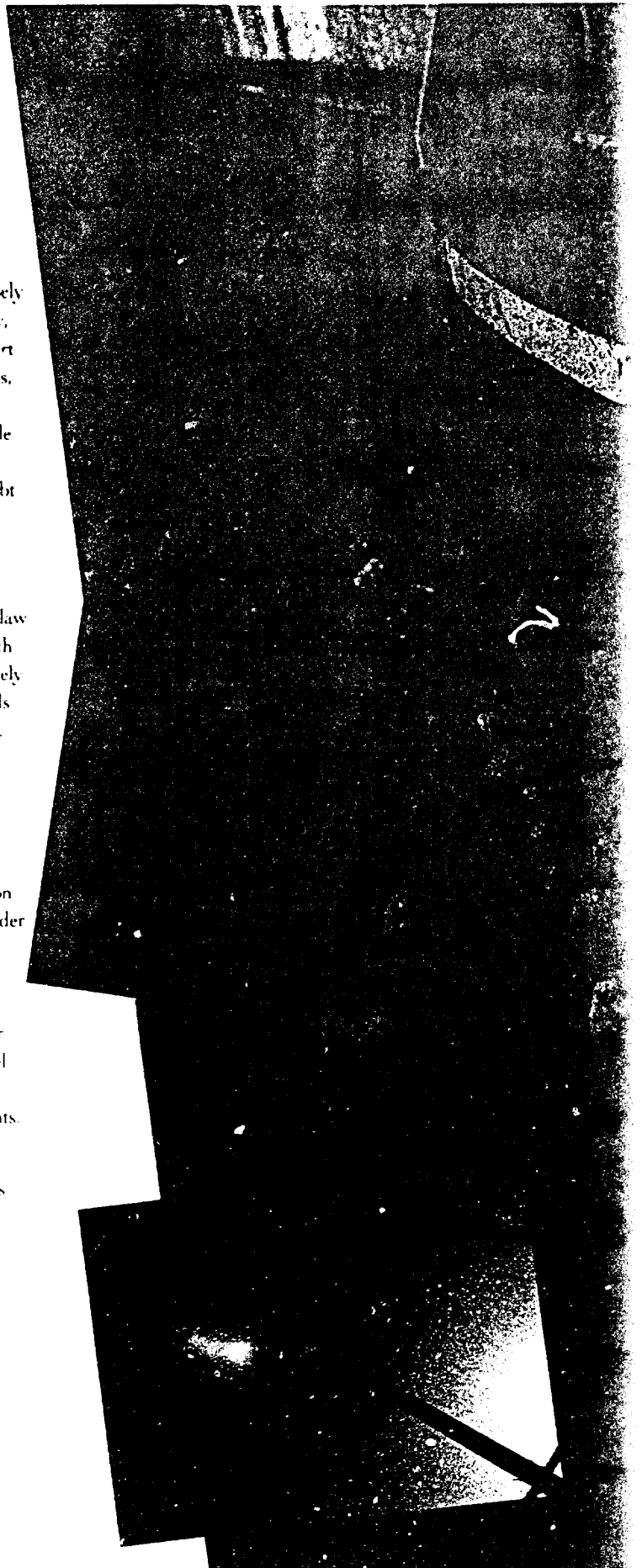
RMI's professionals are well known for the support they provide to the legal community. Our professionals work closely with legal counsel in case analysis and formulation of strategy, as well as in providing expert testimony. RMI provides expert testimony in such areas as utility appraisals, prudence reviews, eminent domain proceedings, economic damage assessments, and contract disputes. In addition, RMI professionals provide expert testimony in regulatory proceedings spanning such topics as cost allocation, tariff design, project certification, debt restructuring, load forecasting, reliability assessments, least-cost planning, rate of return, and environmental assessments and permitting.

RMI has active working relationships with many prominent law firms having notable litigation and regulatory practices at both the state and federal levels. With this experience, we effectively integrate our efforts with local and national legal professionals to respond to a broad range of economic and technical issues.

## **Contract Negotiation and Analysis**

Successful projects and operations depend to a large extent on sound contractual arrangements. RMI is recognized as a leader in preparing, negotiating, evaluating, implementing, and administering contracts for all aspects of utility operations. These contracts cover such areas as project development, participation agreements, interconnection agreements, power supply, financing arrangements, joint venture operations, fuel and water supply, transmission, operating arrangements, material and equipment procurement, and services agreements.

RMI has earned a reputation as an innovator in developing multiparty project development and participation agreements involving both the public and private sectors.





## Project and Construction Management

*"We know we've  
been successful  
when clients confide  
in us that they can  
always count on  
RMI to work with  
them to solve a  
problem, no matter  
how complex or  
how tight the  
timeline."*

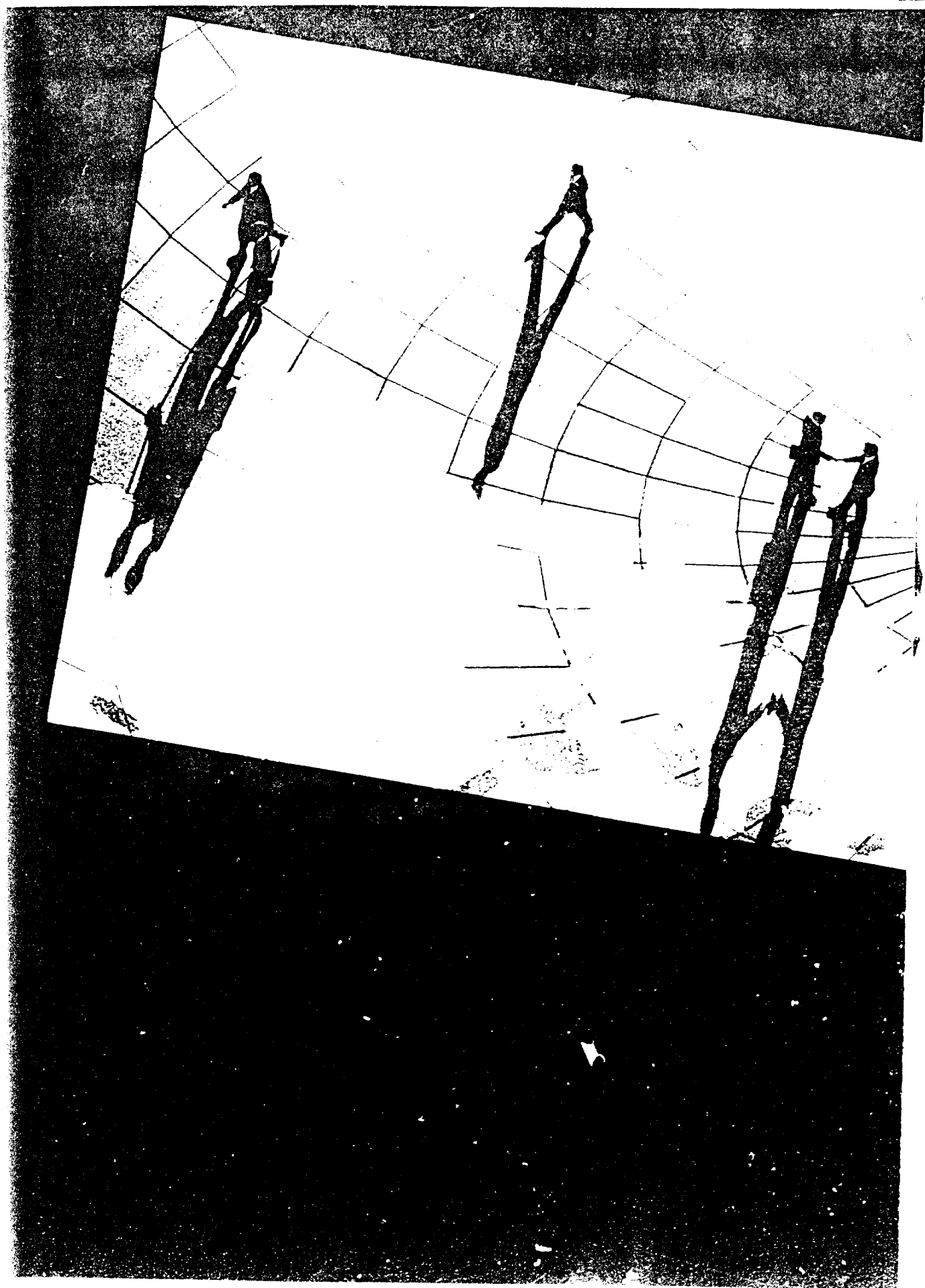
RMI has a comprehensive record of assisting clients in identifying, planning and developing electric energy, natural gas, water, and telecommunications projects. Our project management experience ranges from hydro and thermal generating units and transmission facilities, to natural gas distribution systems and water storage and conveyance facilities, to environmental mitigation programs. Regardless of the size or complexity of the job, RMI provides a single source for the project owner to secure total management services for engineering, environmental, economic, financial, regulatory, contractual, and construction management. Our ability and our commitment to project completion on schedule and within budget are proven by past experience.

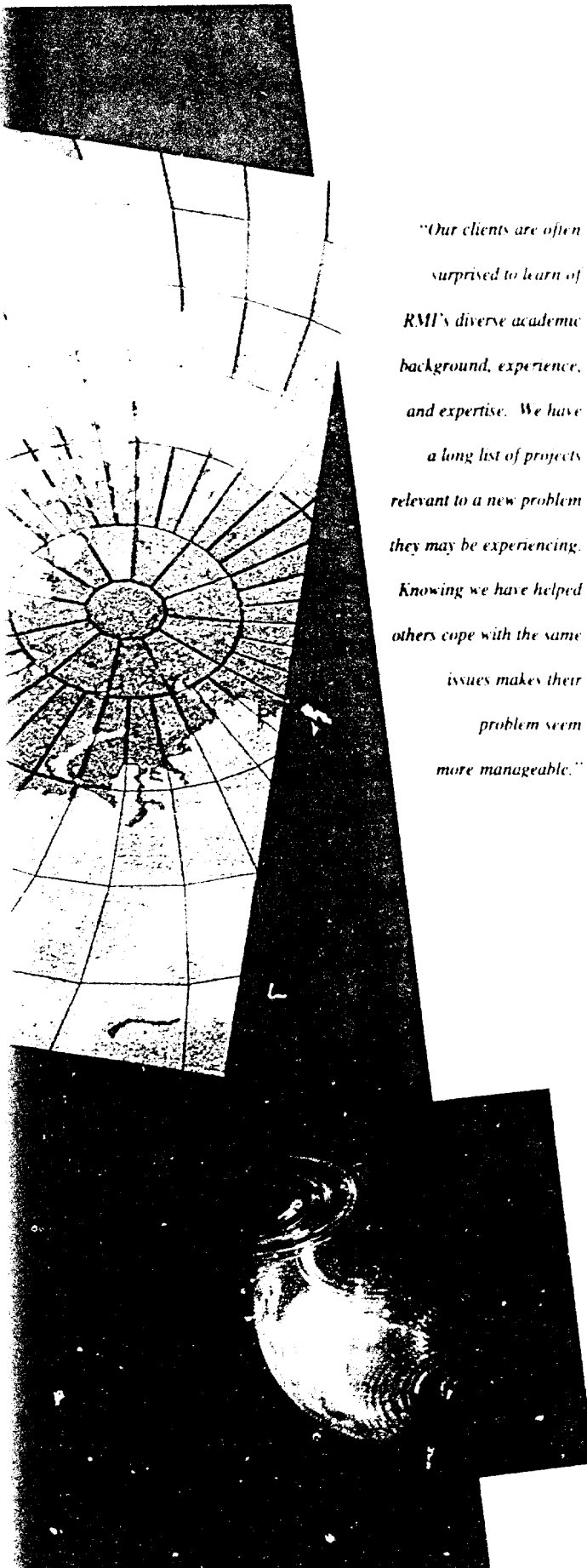
RMI's construction management experience includes bid preparation and analysis, construction plans and specifications, contract administration, and complete on-site supervision. To meet our clients' needs, we draw from a team of managers, administrators, engineers, and field construction specialists supported by the latest computer software and hardware for project accounting and critical-path scheduling. These individuals are responsible for the project through completion, evaluating conformance to design plans and specifications, coordinating the efforts of contractors, and monitoring the project's cost and schedule.

## Communication Services

Effective public communication results not from chance but from careful, yet creative strategic planning. RMI offers a team of communication specialists and graphic artists with hands-on experience in the industries we serve. These professionals are adept at taking complex concepts and developing them into a written and/or visual language that is distinctive, consistent in style, and easily comprehended by a variety of audiences.

RMI's capabilities extend from public involvement and community relations, to corporate and marketing communications, to advertising and media relations. We can integrate these services into one strategic plan or implement selected portions of the plan, complementing our clients' own resources. With our broad experience, RMI designs and produces brochures, newsletters, annual reports, direct mail campaigns, print advertising, logos, cartography, and a wide array of presentation materials in support of public involvement programs, training seminars, and expert testimony.





*"Our clients are often surprised to learn of RMI's diverse academic background, experience, and expertise. We have a long list of projects relevant to a new problem they may be experiencing. Knowing we have helped others cope with the same issues makes their problem seem more manageable."*

## Organizational Development and Training

Today's fast-paced world is dictated by economic uncertainty, deregulation, and heightened competition. Ecological concerns, public scrutiny, and increased diversity among customers and the workforce add another dimension of complexity. RMI is helping organizations meet the challenges inherent in a changing world. We provide a team of professionals with proven management skills and the ability to develop and apply innovative and practical solutions to the most difficult organizational challenges. Our services range from strategic planning and performance improvement efforts, to organizational and staffing evaluations, to employee team building and customer service programs.

RMI also offers a full range of training programs to help improve the knowledge and skills of employees at all organizational levels. Our courses are designed for technical, professional, and management employees, and cover topics as varied as long-range planning, operations and maintenance management, contract negotiations, and leadership development. RMI's training services also provide support to clients managing such complex organizational issues as the environment, business ethics, and quality improvement. Programs emphasize real-world application and are custom designed to meet specific learning objectives, group size, and duration. RMI is experienced in working with boards and citizen groups, and is able to provide information and training programs for these audiences.

## International Services

By the year 2000, the United Nations projects a world population of more than six billion, four times what it was at the turn of this century. This growth, combined with greater demands for economic and social progress, has severely strained already limited natural and financial resources, particularly in developing countries.

RMI and its subsidiaries provide their services in the overseas arena, helping both public agencies and the private sector maintain the delicate balance between socioeconomic development, infrastructure expansion, and environmental protection. By combining years of experience with our technical and management expertise, we have developed a strong track record in energy, water, and environmental resource management. Our work has taken us from the Pacific Rim, Southeast Asia, the Middle East, and North Africa, to Latin America and the Caribbean Islands. Clients have included the World Bank, the World Health Organization, the U. S. Agency for International Development, the Interamerican Development Bank, foreign governments, and private U. S. companies.

## **RMI Subsidiaries**

Recognizing the needs of the industries we serve, RMI maintains a number of subsidiary corporations to help meet the special requirements of our clients. RMI and its subsidiaries work as a team to provide our clients the benefit of shared human resources, knowledge, and insight.

### **Bookman-Edmonston Engineering, Inc.**

Bookman-Edmonston Engineering, Inc., has been in the forefront of the water supply industry for over 50 years. Whether designing major irrigation systems, planning flood control and multipurpose water supply facilities, developing water supply master plans, or managing complex water transfers and exchanges, Bookman-Edmonston brings to each assignment a broad perspective of the issues facing water resource developers and managers today.

The capabilities of Bookman-Edmonston professionals cover every phase of water resource planning, development, reclamation, and treatment, including feasibility and siting studies, hydrologic analysis, environmental assessments, water exchanges, design, construction, and operations. The staff also has in-depth experience in assisting clients in resolving water rights issues and an excellent record of providing innovative approaches to optimizing water utilization. Bookman-Edmonston was one of the first to study and apply conjunctive use of surface and groundwater to improve the efficiency of water use. Also respected in the area of water marketing, the firm has facilitated several large water transfers in the United States and abroad.

### **RMI Fuels Management, Inc.**

The natural gas industry has evolved into an increasingly deregulated and competitive one, presenting unprecedented challenges and opportunities to all segments of the industry. With FERC's Order 636 and amendments to the Clean Air Act, the industry is undergoing even more dramatic change. Producers, pipelines, utilities, and end users are now recognizing that strategic new alliances within the marketplace may be the key to maximizing the cost-effective use of the North American gas transportation grid.

RMI Fuels Management, Inc., was established to assist electric and gas utilities, non-utility generators, and industrial consumers of natural gas in meeting the challenges and optimizing the opportunities brought on by rapid change. The firm's team of professionals offers a broad base of experience in the sale, purchase, storage, and transportation of gas. These professionals provide end users specialized fuels management and procurement services to assist in maximizing the benefits associated with a sound procurement strategy.





## **RMI Utility Services**

Facilities are in constant attendance with clients and facilities are seeking assistance with their operating and maintenance needs. Recognizing this growing need in the industry, RMI Utility Services assists our clients in providing day-to-day operations and maintenance services. This assistance extends to power generation facilities, transmission and distribution lines, distribution natural gas facilities, and water storage, conveyance, and treatment facilities. The capabilities of RMIUS include development of policies, operating procedures, and permit requirements; plans, material, installation, repair, testing, and testing; control, monitoring, and removal of contaminated effluents in accordance with rules and regulations, and controlling discharges.

RMIUS provides the qualified personnel required to technically operate and maintain electric, gas, and water utility systems, as well as the professional staff with the necessary management and engineering experience to support such personnel. The firm also provides supervision of staff, equipment, and materials for the daily operations of these facilities. Depending on the specific requirements of our clients, RMIUS can augment a client's staff as needed temporarily, fill staff vacancies, meet peak work loads, or supervise, operate, and maintain an entire system.

## **Western Ecological Services Company, Inc.**

RMI's environmental services are enhanced by Western Ecological Services Company, Inc. (WESCO) offers a team of environmental scientists and planners with extensive experience in conducting resource inventories and environmental assessments, performing sensitivity and constraint analyses for site and regional planning, and developing wetland and natural resource management plans. The firm has a long history of work with assignments affecting wetlands, water resource development, commercial development, wastewater disposal, cultural areas and wetland settings, and timber, minerals, and energy resource development.

WESCO professionals are recognized experts in environmental policies and regulations, with a particularly strong background in the National Environmental Policy Act and state environmental regulation policies. Since its founding, WESCO has participated in over 100 federal and state EISs and EIRs to meet both federal and state requirements.



## A Perspective on the Future

RMI's role in the future of project management is to continue to provide the industry with the best possible information and resources to help them succeed.

Clients rely on PMI's resources to get the most out of their problem-solving and communication. We bring them the latest trends. As a result, we can help them reach their goals and give clients the advantage of an informed trust in our report.

As we look forward, we see RMI will continue to offer a fresh perspective to help organizations meet the challenges and capture the opportunities inherent in a changing world.

We believe excellence is more than a promise—it's our responsibility.